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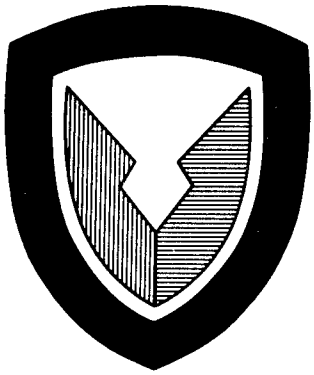

MANUFACTURING METHODS & TECHNOLOGY

PROJECT EXECUTION REPORT

FIRST CY84

OCTOBER 1984

PREPARED BY
USA INDUSTRIAL BASE ENGINEERING ACTIVITY
MANUFACTURING TECHNOLOGY DIVISION
ROCK ISLAND, ILLINOIS 61299-7260

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MMT

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This document is a summary compilation of the Manufacturing Methods and Technology Program Project Status Reports (RCS DRCMT-301) submitted to IBEA from AMC major Army subcommands and project managers. Each page of the computerized section lists project number, title, status, funding, and projected completion date. Summary pages give information relating to the overall AMC program.

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DEPARTMENT OF THE ARMY
US ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY
ROCK ISLAND, ILLINOIS 61299

REPLY TO
ATTENTION OF:
AMXIB-MT

19 OCT 1984

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project Execution Report, First Half CY84

SEE DISTRIBUTION

1. Reference AR 700-90, paragraph 3-4j(1), 15 Mar 82, subject: Logistics, Army Industrial Preparedness Program.

2. The Project Execution Report is a summary compilation of the MMT Project Status Reports (RCS DRCMT-301) submitted to IBEA from AMC Major Army Subcommands (SUBMACOM) and project managers. This document is used as a management tool for monitoring trends of the MMT Program and includes a discussion of the overall AMC Program. There are separate sections in the report showing projects that are new, active, and completed.

3. The submission of status reports is required by AR 700-90 to be made to IBEA within 2-1/2 months after the reporting period. For this document, that date was 17 September 1984. The deadline was extended to 21 September because of the unusually high delinquency rate of 65 percent. Even after the extended deadline, the delinquency rate was still extremely high at 49 percent. Consequently, it was decided to publish a current consolidated report rather than wait for all the delinquent status reports. This would penalize the commands that actually made the deadline. It would also provide for an untimely and obsolete Project Execution Report.

4. Persons who are interested in the details of an individual project should contact the Manufacturing Technology representative at the SUBMACOM. A list of those representatives is included in Appendix III to this report. The Project Officer for this task is Cecilia Fuller, AUTOVON 793-6521.

FOR THE DIRECTOR:

James W. Carstens

JAMES W. CARSTENS
Chief, Manufacturing Technology Division

DISCUSSION

Background

The Army Manufacturing Methods and Technology (MMT) Program was established in 1964 as a part of the Army Production Base Support (PBS) Program. The MMT Program has goals of improving existing manufacturing technology, translating new technology into production line processes, and supporting the modernization and expansion of the military hardware production base. The program is governed by the provisions of AR 700-90, Chapter 3.

Composition of the Report

This MMT Project Execution Report provides the status summaries of 474 active projects which have a total authorized cost of $259.2 million. Total MMT program statistics, as well as the summaries of the active projects are also included. The report is compiled, edited, and published for HQ, AMC by the Manufacturing Technology Division of the Army Industrial Base Engineering Activity (IBEA) in accordance with AR 700-90, paragraph 3-4j(1).

Distribution of this report is extended to Army materiel developers and users and to counterparts in the Navy and the Air Force. Inquiries on the detailed technical aspects of any individual project may be answered by the MMT Program representative of the action command under which the project was completed or is being executed. Inquiries or suggestions concerning this report or other facets of the MMT Program may also be directed to the Manufacturing Technology Division of IBEA.

The report is composed of three major sections:

a. Projects Added 1st Half, CY84 - A list divided by organization of all projects funded during the first half of CY84. Included is a narrative of the problem for each project.

b. Final Status Reports Received During 1st Half, CY84 - A list divided by organization of all projects for which final status reports were received during the first half of CY84. Included is a narrative of the final status for each project.

c. Summary Project Status Report - These reports are divided by organization and include a narrative status of the work accomplished during the six month period for each active project.

MMT Program History

Figures 1 and 2 depict the size and growth of the MMT Program since 1970. These charts last appeared in the November 1983 Project Execution Report and are updated here to include FY84 funding. Figure 1 shows funding levels and Figure 2 deals with number of projects. In each figure, the upper curve represents all of the MMT projects for each fiscal year shown. The lower curve represents only those projects which initiated a new effort during the fiscal year shown. The difference between the two curves on each figure represents those approved dollars (Figure 1) and number of projects (Figure 2) which were approved in the fiscal year as follow-on projects to efforts initiated in prior years.

In the early years, these charts show a great increase in dollars, especially from FY71 to FY74. Then, there is no appreciable growth in the MMT Program between FY74 and FY80. The funding level increases again

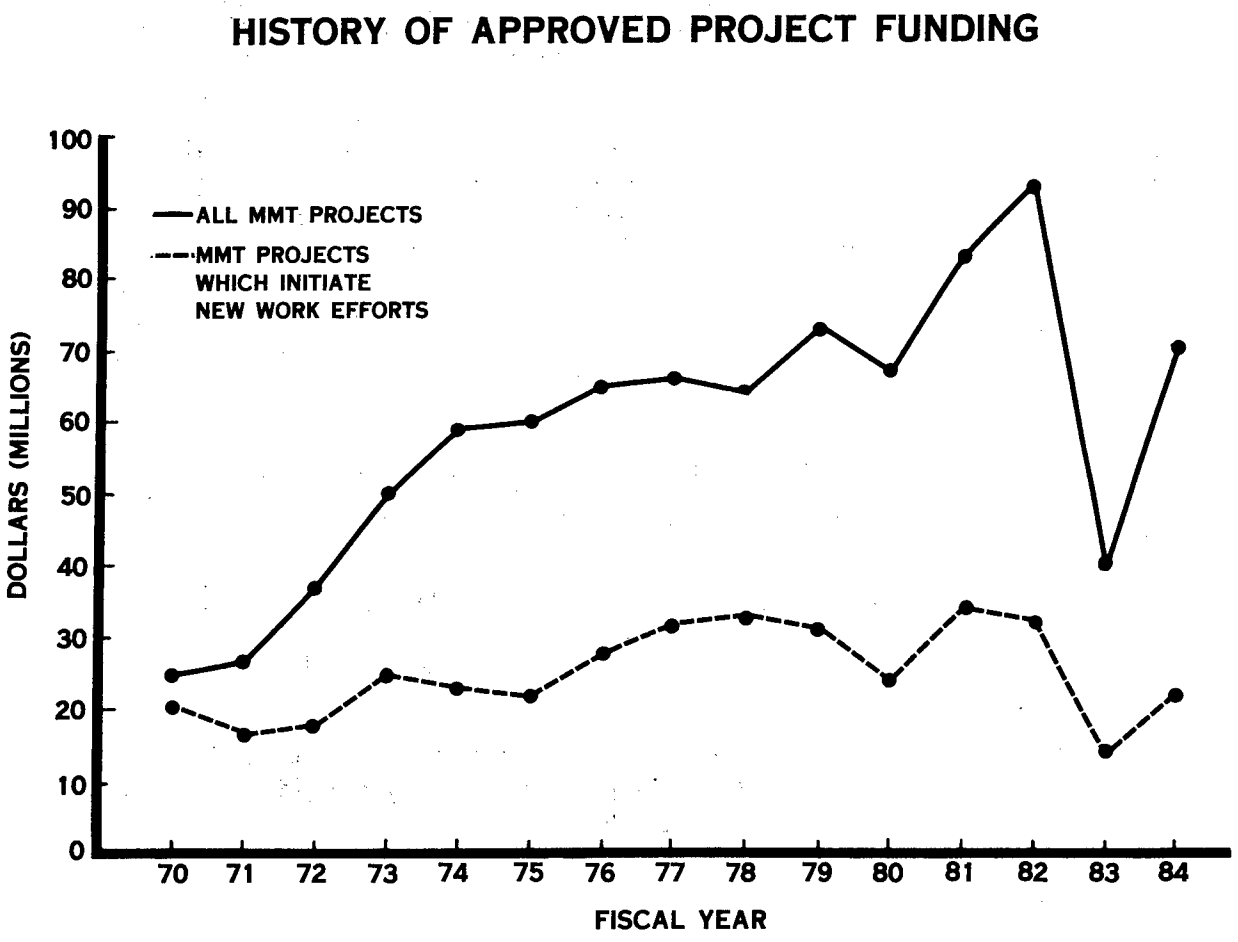


Figure 1

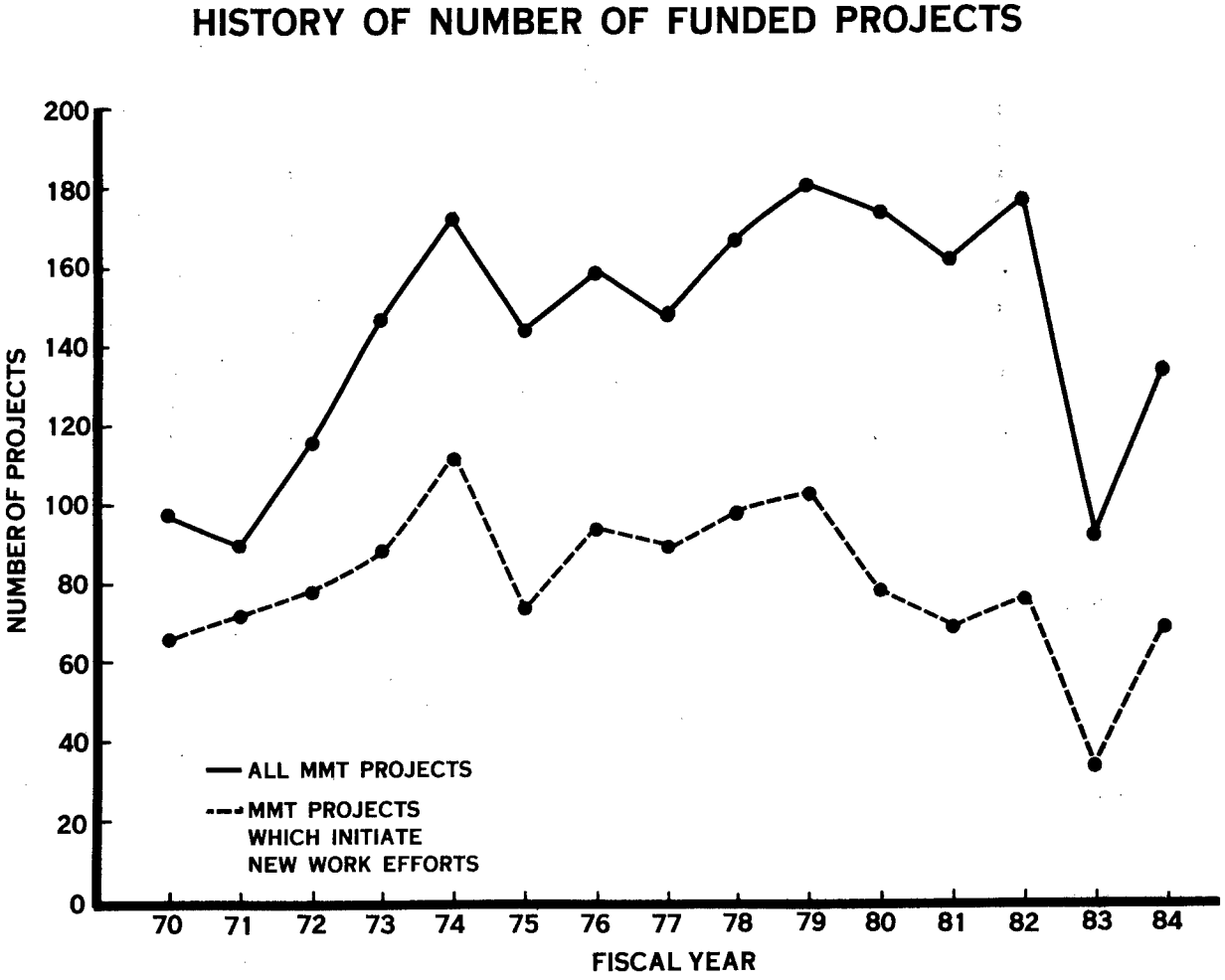


Figure 2

through FY81 and FY82, ranging from the FY80 level of $67 million to $86 million in FY82. These increases were felt to be the result of a renewed, active commitment to take action on improving Defense manufacturing productivity. However, in FY83 the funding level dropped dramatically to $38 million. This was the result of a last minute conversion of the FY83 MMT Program to the R&D account. The net result of Congressional action to initially "line-out" the MMT Procurement account with subsequent Program reinstatement in the R&D account was a decrease of $70 million worth of planned work. Starting in FY84, the MMT Program went through the entire R&D budgeting procedure, which resulted in an MMT Program of $70 million. This is almost double the amount that was received for FY83.

Starting in FY72, less than 50% of each year's budget has been spent on initiating new work efforts. The majority of each year's funds has been spent for follow-on projects to efforts initiated in prior years. From FY74 to FY80 this trend, to a degree, reflected the fact that while

individual work efforts were becoming more costly due to inflation and technical complexity, the overall budget had remained relatively constant permitting the initiation of fewer new work efforts. With an increasing budget in FY81 and 82, one might have expected that this gap would decrease. However, the advent and execution of complex large dollar, multi-year "systems" projects continued to keep the initiation of new work efforts low and the total number of new projects fairly constant. With the great reduction of funds in FY83, priority was placed on funding follow-on work so that inefficient work discontinuity could be kept to a minimum. As a result, in FY83, the funding level for initiating new work efforts was only $12 million. This represented less than 1/3 of the total funding, the lowest value to date. In FY84, the funding level for new projects was $22 million, still less than 1/3 of the total funding for FY84. As in FY83, this is also due to the emphasis on follow-on work.

Status Report Submissions

There are two areas which have been of concern in the past: (1) delinquent status reports, and (2) final status reports without technical reports. Figure 3 summarizes by Command these two situations.

STATUS REPORT (RCS DRCMT 301) SUBMISSIONS

COMMAND	*301 REPORTS REQUIRED	*301 REPORTS SUBMITTED	NUMBER AND (%) OF DELINQUENT 301 REPORTS		NUMBER OF FINAL 301 REPORTS	NUMBER OF TECH RPTS SUBMITTED W/FINAL STATUS REPORTS	NUMBER AND (%) OF DELINQUENT TECHNICAL REPORTS	
AMETA	8	8	0	0%	0	0	0	0%
DESCOM	9	7	2	22%	0	0	0	0%
ERADCOM	44	34	10	23%	10	4	6	60%
TMDE	4	0	4	100%	0	N/A	N/A	
AMMRC	6	6	0	0%	0	N/A	N/A	
TECOM	3	0	3	100%	0	0	0	0%
AVSCOM	50	37	13	26%	7	1	6	86%
CECOM	12	11	1	8%	0	0	0	0%
MICOM	31	26	5	16%	14	9	5	36%
TACOM	54	54	0	0%	7	5	2	29%
AMCCOM (AMMO)	155	9	146	94%	0	0	0	0%
AMCCOM (WPNS)	116	56	60	52%	3	3	0	0%
TROSCOM	6	5	1	17%	2	1	1	50%
TOTAL	498	253	245	49%**	43	23	20	47%

Figure 3

* Does not include FY84 projects which were recently funded and which did not require a status report.

** Delinquency rate reflects a 1 week extension of the cutoff date. Actual delinquency as of the regular cutoff date was 325 reports or 65%.

According to this figure, there was an abnormally high 49% delinquency in receipt of status reports, or 245 reports not submitted by the cut-off date. This is the largest delinquency rate ever experienced. This was due largely to different reporting procedures for AMCCOM Ammunition and Weapons status reports. The status reports for Ammo and Weapons were sent through an additional channel and were not forwarded to IBEA by the deadline.

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each Command. Any delinquency creates a void in the information presented in the compiled report. Therefore, steps are taken to remind the Commands of the submission of these reports. In June 1984, a call letter was mailed out to each SUBMACOM. Enclosed with this letter was a computerized listing of the projects for which a status report was required for this reporting period. Also, phone calls were made on September 1st to those commands whose submission had not yet been received. Even with the reminders, the general trend has been that more and more of the reports are submitted later and later, as is evident by the delinquency rate of 49%. Delinquency and timeliness are areas that must be improved in order to insure a useful review of the progression of the MMT Program.

Relative to the second area of concern, there has always been a requirement that a technical report be prepared for each project. The technical report is an accepted vehicle, and in some cases the only vehicle, for technology transfer. In May 1981, a letter from the Directorate of Manufacturing Technology reinforced the requirement for technical reports. Of the 65 final status reports submitted during the previous reporting period, 30 of them, or 46% did not have technical reports included. For this period, as noted in Figure 3, 43 final status reports were received with 20 of them, or 47% being delinquent the technical report. Greater strides will have to be made to supply these reports if technology transfer is expected to occur. The 43 projects for which final status reports were received during this period can be found in a separate section on page 33 where the final work status is given for each project.

Program Summary

Manufacturing Methods and Technology (MMT) projects and efforts are major elements of the Army's Manufacturing Technology (MANTECH) Program. AR 700-90 succinctly describes the MANTECH objective as the improvement of the industrial readiness and efficiency of the production base for Army materiel. Further defined objectives are stated in the Statement of Principles for the DOD Manufacturing Technology Program. This Statement, originating at the Deputy Under Secretary of Defense level, not only establishes ground rules for the Program but highlights the level of emphasis that the Program receives.

To attain the objectives described in the Statement of Principles, the Army, prior to FY83, funded discrete work units called "Projects" on a yearly basis. These projects, identified by a seven-digit number, contained work requests, which upon completion would result in an end product whose technical transfer could be effected. At times, in order to have a total work package which was implementable, (i.e., which could achieve the payback for which the work was funded) the scope was of such a magnitude that total funding in one fiscal year could be an inefficient use of resources.

In this event, the total work was multi-year funded, (i.e., be more than one project, each having a technically transferrable end product). These total implementable work units were called "Efforts". These efforts could consist of many projects or just be one project, depending on the amount of work required to achieve the implementable technical goal. Efforts are identified by a four-digit number which is the same as the last four digits of a project or projects which make up the effort.

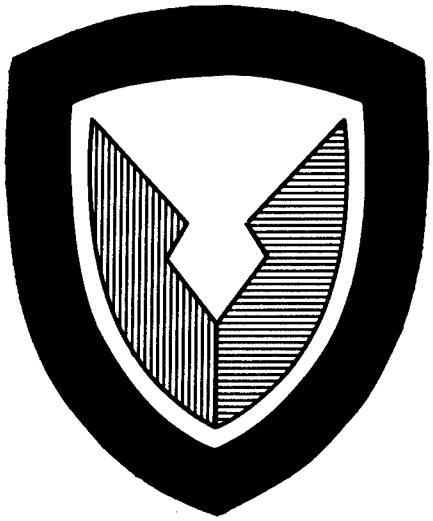
For FY83 and FY84 the conversion from the Procurement Account to the R&D account will result in some administrative changes. An MMT "project" will, under R&D parlance, be considered a "task". Also, to accommodate the R&D obligational goals, these yearly funded tasks will likely become level of effort work rather than discrete, stand alone work units which result in end products whose technical transfer could be effected. Multi-year funding will probably become more prevalent in leading to the completion of an implementable work "effort".

Due to these changes, it is likely that MMT reporting procedures will change in the future.

Because of the unusually high delinquency rate (49%), the three charts that normally follow have been omitted--MMT Program Summary, Active Projects by Fiscal Year, and Program Funding Expenditures. The program slippage section has also been omitted due to the lack of data.

MMT PROGRAM

PROJECTS ADDED 1ST HALF, CY84



PROJECTS ADDED IN 1ST HALF, CY84

AMETA

D 84 5052
ARMY ENGINEERING DESIGN HANDBOOKS

TECHNICAL SCIENTIFIC AND ENGINEERING DATA IS CONTINALLY BEING GENERATED WITHIN THE ARMY AND NEEDS TO BE COLLECTED IN APPROPRIATE DOCMENTS.

DESCOM

G 84 0002
MMT CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING

SPRAY PAINTING AND SANDING OF ALUM SKINNED MILITARY CONTAINERS IS LABOR INTENSIVE AND CREATES A HARSH WORKING ENVIRONMENT. DEVICES TO SENSE PRESENCE AND ABSENCE OF PAINT + TO CONTROL HEAT BUILD-UP TO PREVENT ALUM SKIN DELAMINATION ARE NEEDED.

G 84 8002
ANAD SUBASSEMBLY MODERNIZATION

THE EXISTING DEFICIENCIES IN FACILITIES, EQUIPMENT, AND OPERATING METHODS SHOULD BE CORRECTED.

ERADCOM

H 84 3010
MILLIMETER-WAVE SOURCES FOR 60 AND 94 GHZ

TO ESTABLISH A MANUFACTURING CAPABILITY FOR PRODUCTION OF IMPATT DIODES WHICH ARE UNIFORM ENOUGH TO BE FIELD REPLACEABLE IN ARMY SYSTEMS.

H 84 5107
MMT EHF SOLID STATE AMPLIFIER

TUNING AND FABRICATION OF THE AMPLIFIER MODULE, ALONG WITH SELECTION OF PROPER DIODES, PRESENTLY TAKES WEEKS, RESULTING IN LOW VOLUME CAPABILITY AND EXTREMELY HIGH COSTS.

H 84 5111
VAPOR GROWTH FOR THIRD GENERATION PHOTOCATHODE

LIQUID EPITAXIAL GROWTH PROCESS REQUIRES- A)LARGE AND COSTLY HIGH TEMP REACTORS, B)LARGE QUANTITIES OF SATURATION MELT MATERIALS, C) COSTLY QUALITY GALLIUM ARSENIDE SUBSTRATES, D)LENGTHY OPERATION PROCESS PER SINGLE GROWTH.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

H 84 5151
LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MOD DET ARRAYS-PH II

LOW YIELD ON CURRENT METHOD OF MANUFACTURE OF COMMON MODULE DETECTOR ARRAYS. GROWTH OF HGCDTE CRYSTALS REQUIRES MANUAL LAPPING, POLISHING + THINNING TO ACHIEVE PERFORMANCE SPECIFICATIONS.

H 84 5162
EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II

PRESENT R AND D MODELS OF UNATTENDED EXPENDABLE JAMMER RESERVE POWER SUPPLY (UEJPS) ARE HAND MADE 1 OR 2 AT A TIME. UNLESS FABRICAION/ASSEMBLY ARE PRODUCTION ENGINEERED, LABOR COSTS WILL MAKE THE BATTERY PROHIBITIVELY EXPENSIVE.

H 84 5168
AUTOMATIC RETICLE INSPECTION SYSTEM - PHASE II

THERE IS NO WAY TO CHECK TAPE-GENERATED RETICLE PATTERNS AGAINST THE COMPUTER-GENERATED MASTER TAPE. VISUAL INSPECTION OF RETICLES FOR PINHOLES OR DUST PARTICLES IS VERY DIFFICULT.

H 84 5174
AUTO SPUT PROC CONT F/PROD ZINC OXIDE ACOUSTIC DEVICES - CAM

GAS MIXTURE, ZNO PURITY + SPUTTERING PARAMETERS ARE MANUALLY MONITORED USING A MASS ANALYZER. CORRECTIONS IN FLOW + DEPOSITION PROCESSES ARE SLOW AND PERFORMED AFTER OCCURRENCE.

H 84 5180
LOW COST DEWAR + INTERCONNECT ASSEMBLY - PHASE II

THE GOLD WIRE BONDED CONNECTIONS ARE MADE BY HAND WHICH IS A TEDIOUS AND EXPENSIVE PROCESS. THE GLASS STEM IS HAND FASHIONED AND IS PRONE TO DAMAGE.

H 84 5196
AUTO METHODS F/MFG + APPLY OF LEADLESS CHIP SOCKETS TO PWB

MANY ELECTRONICS ITEMS PRODUCED FOR ARMY ARE BUILT IN FACTORIES NOT USING MODERN METHODS AND EQUIPMENT, AUTOMATIC MATERIALS HANDLING SYSTEMS, OR COMPUTERIZED MANAGEMENT INFORMATION SYSTEMS. THESE PLANTS MUST BE UPDATED TO IMPROVE PRODUCTIVITY.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

F 84 7000
LASER POLARIZERS

US SOURCES HAVE NOT BEEN ABLE TO CONTROL IMPORTANT PARAMETERS IN MANUFACTURING HIGH POWER DENSITY LASER POLARIZERS. THESE POLARIZERS MAKE THE SMITTED ENERGY FROM A LASER TARGET DESIGNATOR UNIDIRECTIONAL.

TMDE

3 84 3115
ENGINEERING FOR METROLOGY AND CALIBRATION

MEASUREMENT SCIENCES OR METROLOGY MUST BE CONTINUALLY ADVANCED IN RELEVANT TECHNOLOGY AREAS TO KEEP PACE WITH MANY ARMY PROGRAMS.

AMMRC

M 84 6350
MATERIALS TESTING TECHNOLOGY (MTT)

DESTRUCTIVE AND CERTAIN CONVENTIONAL NON-DESTRUCTIVE TESTING TECHNIQUES ARE RESPECTIVELY UNSUITED AND INADEQUATE OR HARD TO BE ADAPTED TO ON-LINE PRODUCTION TESTING USAGE.

M 84 6390
PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER

THE SUCCESS OF THE MMT PROGRAM IS VERY DEPENDENT ON WHETHER THE RESULTS OF MMT WORK GET IMPLEMENTED. THIS IN TURN IS DEPENDENT ON WHETHER INFORMATION CONCERNING THE MMT TECHNOLOGY IS MADE AVAILABLE AND USED BY CONCERNED PARTIES.

TECOM

O 84 5071
TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES

ARTILLERY,VEHICLE AND ELECTRONIC CONVENTIONAL TEST CAPABILITIES NEED TO BE UPGRADED TO PROVIDE MORE TIMELY ACCURATE TEST DATA FOR THE TEST AND EVALUATION PROCESS.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

AVSCOM

1 84 7187
POWDER METALLURGY GEARS FOR HELICOPTER APPLICATIONS

PRODUCE GEARS FOR TURBINE ENGINES AT A LOWER COST.

1 84 7298
HIGH TEMPERATURE VACUUM CARBURIZING

GEAR CARBURIZING IS PRESENTLY CARRIED OUT WITH A RELATIVELY SLOW ENDOTHERMIC PROCESS, TYPICALLY AT 1700 DEG F, WHICH REQUIRES SURFACE PROTECTION AGAINST DECARBURIZING DURING THE CYCLE OR A POST HEAT TREAT REMOVAL OF THE DECARBURIZED LAYER.

1 84 7300
IMPROVED LOW CYCLE FATIGUE (LCF) CAST ROTORS

INTEGRALLY CAST TURBINE ENGINE ROTORS HAVE BEEN SHOWN TO BE COST EFFECTIVE. HOWEVER, INVESTMENT CASTING RESULTS IN LARGE GRAIN SIZES IN THE DISK REGION AND THIS REDUCES FATIGUE LIFE COMPARED TO WROUGHT MATERIAL.

1 84 7302
PRODUCTION OF BORIDE COATED LONG LIFE TOOLS

AIRFRAME COMPOSITE COMPONENTS REQUIRE EXTENSIVE MACHINING WHICH IS EXPENSIVE IN TERMS OF LABOR HOURS REQUIRED AND TOOL COSTS.

1 84 7344
RIM MOLDING OF HELICOPTER COMPONENTS

PRESENT METHODS OF FABRICATING AIRCRAFT SECONDARY STRUCTURES (ESPECIALLY ACCESS DOORS) INVOLVE EXCESSIVE LABOR AND EXPENSIVE MATERIALS. STRUCTURES MADE FROM FIBER REINFORCED SANDWICH PANELS AND/OR FORMED SHEET METAL OFTEN REQUIRE COMPLEX ASSEMBLY.

1 84 7371
INTEGRATED BLADE INSPECTION SYSTEM (IBIS)

INSPECTION OF TURBINE ENGINE BLADES AND VANES NECESSITATES HIGH ACCURACY. THE EFFORT IS TIME CONSUMING AND SUSCEPTABLE TO ERROR.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

1 84 7378
STAINLESS STEEL GEARBOX HOUSING

HELICOPTER TRANSMISSION HOUSINGS ARE MADE FROM MAGNESIUM CASTINGS. THEY ARE COSTLY AND HAVE HIGH REPLACEMENT RATES AT OVERHAUL DUE TO CRACKS AND CORROSION.

1 84 7382
LOW-COST COMPOSITE MAIN BLADE FOR THE UH-60A

MANUFACTURING TECHNOLOGY FOR COCURING GLASS AND GRAPHITE FILAMENT WOUND MAIN ROTOR BLADES HAS NOT BEEN ESTABLISHED FOR THE PRODUCTION ENVIRONMENT.

1 84 7383
MOLDED HARDWARE FOR TWO AXIS DRY GYROS

THE PRIMARY COST DRIVER IN THE MANUFACTURE OF CURRENT INERTIAL GYROSCOPES IS THE MACHINING OF SMALL PRECISION COMPLEX METAL PARTS. THE MACHINED PARTS ARE HIGH COST AND ALSO REPRESENT PRODUCTION LEAD TIME PROBLEMS.

1 84 7384
COMPOSITE ENGINE GEARBOX HOUSING

CONVENTIONAL GEAR HOUSINGS CONSISTING OF MAGNESIUM EXHIBIT LOW MODULUS, LOW FATIGUE STRENGTH, AND SUSCEPTABILITY TO CORROSION.

1 84 7389
PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS

CURRENT METHODS OF MACHINING ALUMINIUM FORGINGS ARE EXPENSIVE AND REQUIRE AN EXCESSIVE NUMBER OF PARTS.

1 84 7416
ADVANCED TURBINE AIRFOIL CASTINGS FOR LONG LIFE

TURBINE AIRFOLS ARE DESIGNED TO A STRESS RUPTURE LIMIT WHETHER COOLED OR UNCOOLED. THIS LIMIT IS LOW DUE TO EQUIAXED CAST SUPERALLOY MATERIALS CURRENTLY USED AND THEIR INHERENT GRAIN BOUNDARY LIMITATIONS.

1 84 7417
LOW-COST DISKS BY CAP -CONSOLIDATION BY ATMOSPHERIC PRESSURE

POWDER METAL DISKS FORM A SIGNIFICANT PART OF THE ENGINE COST DUE TO EXPENSIVE TOOLING/DIE REQUIREMENTS AND HIGH PRESSURE CONSOLIDATION EXPENSE.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

1 84 7443
ROBOTICS FOR HIGH PRODUCTIVITY FORGINGS

THE NEED FOR INCREASED PRODUCTIVITY COUPLED WITH DECREASED FUNDING DICTATES THAT CURRENT TECHNOLOGY, SUCH AS ROBOTICS, MUST BE UTILIZED FULLY ' EFFECTIVELY IN THE MANUFACTURING PROCESS. AS FORGING CAPCITY DECREASES PRODUCERS NEED TO IMPROVE METHODS.

1 84 7465
FABRICATION TECH F/ADVANCED COMPOSITE SENSOR SUPPORT STRUCT

THE CURRENT PROTOTYPE SENSOR SUPPORT STRUCTURE IS COMPOSED OF BERYLLIUM WHICH IS TOXIC, EXPENSIVE AND SOLE SOURCE SUPPLIED.

1 84 7468
INTEGRATION OF ADVANCED REPAIR BONDING

CORPUS CHRISTI ARMY DEPOT IS EXPERIENCING PROBLEMS WITH THE ANALYSIS AND CONTROL OF BONDING QUALITY WITH ADHESIVES AND PRIMERS USED IN HONEYCOMB BONDING.

1 84 7470
HAND HELD AUTOMATIC POWER CRIMPER

PRESENTLY UP TO 50 PERCENT OF THE WIRE TERMINATIONS OF THE HELICOPTER WIRE HARNESS ASSEMBLIES ARE ACCOMPLISHED ON THE HARNESS FORM BOARD AFTER THE WIRES ARE TIED INTO BUNDLES. TERMINALS ARE INSTALLED BY HAND WHICH IS TO TIME CONSUMING.

1 84 7471
PROCESS CONTROL SYSTEM FOR N/C AND CNC MACHINES

PRESENT PROCESS CONTROL SYSTEMS FOR NC AND CNC MACHINES DO NOT INCLUDE REAL-TIME MONITORING AND FEEDBACK COMPENSATION.

1 84 7473
MMT - FIBER REINFORCED THERMOPLASTIC STRUCTURES

CURRENT AIRFRAME SECONDARY STRUCTURES ARE CONSTRUCTED FROM SHEET METAL OR THERMOSETTING COMPOSITES. SHEET METAL CONSTRUCTION REQUIRES MANY DETAIL PARTS AND LABOR, AND THERMOSETTING COMPOSITES REQUIRES EXPENSIVE STORAGE, FORMING AND CURING STEPS.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

1 84 7474
SINGLE CURE TAIL ROTOR

THE CURRENT METHOD OF CURING COMPOSITE TAIL ROTOR BLADES IS TO PRECURE EACH MAJOR DETAIL SEPARATELY AND THEN BOND THEM TOGETHER AS A FINAL ASSEMBLY. THIS APPROACH IS NECESSARY IN ORDER TO PROVIDE A STABLE ELEMENT FOR FORMING AND HOLDING NOMEX CORE.

7 84 8198
T-700 TURBINE ENGINE MFG PRODUCTIVITY IMPROVEMENT

INITIAL INVESTIGATION GE PLANTS INDICATE ADVANCED TECHNOLOGY AND COST IMPROVEMENT CONCEPTS CAN BE APPLIED TO THE MANUFACTURING PROCESSES, EQUIPMENT AND SUPPORT SYSTEMS TO REDUCE COST AND IMPROVE PRODUCTIVITY.

CECOM

2 84 3068
INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES

PRESENTLY AVAILABLE VARACTORS AND PIN DIODES MADE BY SILICON DIODE TECHNOLOGY ARE EXPENSIVE. THE IR PRODUCTION TECHNIQUES ARE VERY LABOR INTENSIVE, YIELDS ARE LOW, AND UNIFORMITY IS POOR. MATCHING REQUIRES EXTENSIVE TESTING.

2 84 3094
COMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS (CAM)

COMMUNICATIONS EQUIPMENT IS MANUFACTURED USING LABOR INTENSIVE, LOW VOLUME PROCESSES. MACHINES ARE OLD AND UNAUTOMATED. NEW METHODS, PROCESSES AND EQUIPMENT ARE NEEDED.

MICOM

3 84 1051
REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS

PRESENT ASBESTOS CONTAINING INSULATORS CAN NO LONGER BE MANUFACTURED AFTER 1981 DUE ITS BEING IDENTIFIED AS A CARCINOGEN. THUS THE GOVT HAS LOST THE CAPABILITY OF USING INSULATING MATERIALS THAT HAS PROVEN TO BE AN EXCELLENT THERMAL BARRIER.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

3 84 1060
ELECTRICAL TEST AND SCREENING OF CHIPS

ONE UNRELIABLE CHIP IN MILITARY ELECTRONIC ASSEMBLIES CAUSES REJECTION OR DESTRUCTION OF THE ENTIRE PACKAGE. PRESENT MEANS FOR DETERMINING CHIP RELIABILITY OR INTEGRITY IS A PROBE TESTING TECHNIQUE WHICH IS TIME CONSUMING AND DESTRUCTIVE.

3 84 1075
ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM)

ALTHOUGH INTEGRATED CIRCUITS, HYBRID CIRCUITS,PRINTED CIRCUITS AND CABLES ARE DESIGNED ON A COMPUTER, THERE IS LITTLE COMPUTERIZED CONTROL OF PROCESSES USED TO PRODUCE THESE ITEMS. A MASTER PLAN IS NEEDED TO DEFINE THE AREA AND REQUIREMENTS.

3 84 1089
INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS

CURRENT FILAMENT WOUND COMPOSITE ROCKET MOTOR CASES REQUIRE FORGED METAL POLE PIECES, NOZZLE CLOSURE ATTACHMENT RINGS, AND OTHER ATTACHMENT RINGS. THESE COMPONENTS ARE EXPENSIVE, AND REQUIRE LONG LEAD TIME PROCUREMENT.

3 84 1109
ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM

MANUAL HARNESS PROCEDURES UTILIZE SEVERAL STATIONS + SIGNIFICANT REPEATED MATERIAL HANDLING + TRANSFER. APPROXIMATELY 50 PERCENT OF FABRICATION TIME IS DEVOTED TO HANDLING, SORTING, AND IDENTIFICATION.

3 84 1124
SCANNING TDI FOCAL PLANE ARRAY DETECTORS

THERE IS NO PRODUCTION METHOD FOR MAKING A SCANNING FOCAL PLANE ARRAY FOR SEEKERS THAT INCLUDES THE SIGNAL PROCESSING AND DEWAR ASSEMBLY. PRESENTLY, UNITS ARE HAND-MADE WITH ATTENDANT HIGH COSTS. LONGER LIFE DEWARS ARE NEEDED.

3 84 1126
WOUND ELASTOMER INSULATOR PROCESS

LARGE TACTICAL ROCKET MOTOR INSULATORS ARE COSTLY, LACK DESIGN CHANGE FLEXIBILITY AND SUFFER LONG LEAD TIMES. CURRENT PROCESSES INVOLVE BONDING TOGETHER FINISHED SECTIONS OR LAY-UP OF GREEN STOCK FOLLOWED BY STITCHING, CURING AND FINISHING TO SIZE.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

3 84 3449
ALTERNATE PROCESS FOR IPDI

A NUMBER OF CHEMICAL INGREDIENTS USED IN SOLID ROCKET PROPELLANTS HAVE BECOME UNAVAILIABLE BECAUSE SOME OF THE REAGENTS ARE HAZARDOUS.

TACOM

4 84 4001
MANUFACTURING FOR CORROSION PREVENTION IN TACTICAL VEHICLES

CURRENTLY THE ARMY HAS SEVERE CORROSION PROBLEMS WITH ITS TACTICAL TRUCK FLEET. ACHIEVING CORROSION RESISTANCE THROUGH THE APPLICATION OF RUSTPROOFING COMPOUNDS CONTRADICTS THE NBC REQUIREMENT FOR VEHICLES WITH CHEMICAL AGENT RESISTANT COATINGS.

4 84 5053
ADIABATIC DIESEL ENGINE COMPONENTS (PHASE III)

FABRICATION OF HIGH EFFICIENCY, HIGH TEMPERATURE DIESEL ENGINES REQUIRES ADVANCED MATERIALS. ENGINES FABRICATED WITH CERAMIC COMPONENTS HAVE BEEN DEMONSTRATED IN R+D BUT MANUFACTURING METHODS FOR SERIAL PRODUCTION COMPONENTS ARE LACKING.

4 84 6057
ABRAMS (M1) COMBAT VEHICLE

MATERIALS AND MANUFACTURING PROCESSES EMPLOYED IN THE MFG OF THE M1 CAN BE IMPROVED BY INCORPORATING NEW TECHNOLOGIES TO THE CURRENT SYSTEM. THIS WILL ENABLE THE M1 TO BE PRODUCED MORE ECONOMICALLY.

4 84 6077
SEALED LEAD ACID STORAGE BATTERY

MILITARY STORAGE BATTERIES LAST ONLY ABOUT 24 MONTHS. THEY REQUIRE PERIODIC MAINTENANCE AND SERVICE. ALSO, THEY ARE SUBJECT TO LEAKAGE, SPILLAGE AND SUBSEQUENT CORROSION OF TERMINALS AND BATTERY COMPONENTS.

4 84 6090
TOOELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM (PH II)

THE AGING FACILITY AND OUTDATED TECHNIQUES HAVE RESULTED IN AN INEFFICIENT OPERATION AND SLOW DELIVERIES.

4 84 6121
CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE

MANUFACTURING TECHNIQUES FOR THE BFV ARE IN NEED OF IMPROVEMENT IN THE AREA MATERIAL SELECTION, MANUFACTURING PRINCIPALS, AND QUALITY CONTROL. IN ADDITION CURRENT TECHNIQUES ARE EXTREMELY LABOR INTENSIVE.

AMCCOM (AMMO)

5 84 0904
CHEMICAL REMOTE SENSING SYSTEMS

FIRST GENERATION CHEMICAL REMOTE SENSING SYSTEMS HAVE HIGH PRIORITY. THEY REQUIRE COMPLEX, UNIQUE, SOPHISTICATED COMPONENTRY WHICH IS NOT AVAILABLE TOO MEET PRODUCTION REQUIREMENTS. COMPONENTS WILL BE HAND FABRICATED FOR INITIAL DEVELOPMENT.

5 84 0913
COATING OF DECON AGENT CONTAINERS

CURRENT METALLIC DECON AGENT CONTAINERS CORRODE BEFORE THE REQUIRED SHELF LIFE OF THE AGENTS IS REACHED. ALTERNATIVE CONTAINERS ARE NOT AVAILABLE, BUT PLASTIC LINERS HAVE BEEN SHOWN TO EXTEND THE LIFE OF CURRENT CONTAINERS SIGNIFICANTLY.

5 84 0918
MODERNIZATION OF FILTER PENETRATION EQUIPMENT

CURRENTLY, ALL PROTECTIVE PARTICULATE FILTERS ARE TESTED WITH THREE TYPES OF EQUIPMENT. THIS EQUIPMENT IS OBSOLETE, INEFFICIENT, END UNRELIABLE.

5 84 0924
MANUFACTURING PROCESS FOR GAS MASK CANISTERS

THE CANADIAN GAS MASK CANISTER IS BEING ADAPTED TO THE US STANDARDS UNDER A MACI PROGRAM. THE CANADIANS ARE HAVING DIFFICULTY PRODUCING THE CANISTERS RESULTING IN HIGH REJECT RATE.

5 84 0925
PROTECTIVE MASK LEAKAGE TESTING

CURRENT GAS MASK TESTER DOES NOT SIMULATE THE ACTUAL FIELD USE AND IS NOT SENSITIVE ENOUGH TO DETECT SMALL LEAKS

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 0926
MMT FOR XM22 CHEMICAL AGENT ALARM SYSTEM

A CHEMICAL AGENT ALARM SYSTEM, XM22 IS CURRENTLY UNDER DEVELOPMENT TO PROVIDE CAPABILITY OF CHEMICAL DEFENSE. COMPLEX COMPONENTS IN THE ALARM ARE DIFFICULT TO PRODUCE AND LACK AVAILABLE HIGH PRODUCTION TECHNIQUES.

5 84 1295
MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT

CHARCOAL FILTER TESTING EQUIPMENT NEEDED TO PROVIDE TESTING CAPABILITY FOR VARIOUS CHEMICAL AGENTS DOES NOT EXIST.

5 84 1348
SUPER TROPICAL BLEACH

THERE IS A MAJOR SHORTFALL BETWEEN THE FY78 REQUIREMENTS FOR THIS ITEM AND THE QUANTITY OF IMPORTED CHLORINATED LIME KNOWN TO BE AVAILIABLE.

5 84 1802
AUTOMATED OPTICAL MICROELECTRONICS INSPECTION

HYBRID FABRICATION INVOLVES CHIP PLACEMENT + CHIP + WIRE BONDING. INSPECTION IS NOT UNIFORM AMONG INSPECTORS + IS TIME CONSUMING. NEW AUTOMATIC INSPECTION PROCESS ARE NEEDED WHICH INSURE DEVICE UNIFORMITY + GUARANTEE RELIABILITY.

5 84 1803
IMPROVED LEAD DIOXIDE ELECTROPLATING TECHNOLOGY

ADHESION OF PB/2 PLATE IN ELECTRODES IN LIQUID RESERVE POWER SUPPLIES FOR SPIN-STABILIZED FUZING IS OFTEN POOR. THIS CAUSES (1)CHIPPING AND FLAKING, HENCE REJECT MATERIAL AND (2)POOR DISCHARGE EFFICIENCY AT HIGH TEMPS CAUSING SHARER BATTERY LIFE

5 84 1914
PROCESS ENGINEERING FOR EAK EXPLOSIVES

THE AIR FORCE IS INVESTIGATING USE OF ETHYLENE DIAMINE DINITRATE/AMMONIUM NITRATE/POTASSIUM NITRATE EUTECTIC MIXTURE (EAK) AS A CASTABLE INSENSITIVE EXPLOSIVE FILL FOR AIR FORCE BOMBS. PROCESS ENGR RRMTRS HAVE TO BE DET TO PROVIDE DSGN INFO F/IPF.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4078
UPGRADE SAFETY, READINESS + PROD OF EXISTING MELT POUR LINES

SIGNIFICANT IMPROVEMENT OF MELT POUR FACILITIES IS NOT BEING REALIZED BECAUSE DESIGN APPROACHES FOR COST-EFFECTIVE INTERMEDIATE UPGRADING ARE NOT AVAILABLE.

5 84 4200
TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS

TNT MELT LOADING REQUIRES AN ORTIMUM RATIO OF MOLTEN AND SOLID TNT IN THE EXPLOSIVE MIX AT THE TIME OF POUR. THE RATIO IS OBTAINED BY THE ADDITION OF FLAKE TNT TO A QUANTITY OF MOLTEN TNT BASED ON OPERATOR JUDGEMENT.

5 84 4273
AUTOMATED PRODUCTION OF STICK PROPELLANT

PRESENT BATCH TECHNIQUES FOR STICK PROPELLANT MFG INVOLVE MUCH HAND LABOR THEREBY RESULTING IN LIMITED PRODUCTION CAPACITY, HIGH COST, AND HAZARD EXPOSURE.

5 84 4281
CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS

ENERGY MAY NOT BE AVAILABLE IN THE FUTURE TO MEET PRODUCTION REQUIREMENTS.

5 84 4358
AUTO LINE PROCESS INSPECT OF NEW EEDS (ALPINE)

INSPECTION OF BRIDGE WIRE ON ELECTRIC DETONATORS.

5 84 4406
IMPROVING THE YIELD OF HMX DURING RDX NITRILYSIS

THE CURRENT MANUFACTURING PROCESS FOR HMX IS INEFFICIENT IN THAT YIELDS OBTAINED ARE STILL LESS THAN THEORETICAL.

5 84 4473
AUTOMATED LEAK DETECTION OF WP MUNITIONS

THE CURRENT METHOD OF HEATING THE WHITE PHOSPHOROUS MUNITIONS TO CHECK FOR LEAKS IS LABOR INTENSIVE AND IS NOT UNIFORM FOR ALL ROUNDS.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4489
ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES

MUCH WORK HAS BEEN DONE IN THE PROPELLANTS AND EXPLOSIVES PLANTS TO MEET THE POLLUTION ABATEMENT STANDARDS. HOWEVER, ALL OF THE GOALS HAVE NOT YET BEEN MET.

5 84 4510
AUTO ASSY OF ADDITIVE LINER TO TANK CTG

APPLYING ADHESIVE TO, CURLING, AND INSERTING AND POSITIONING THE LINER INSIDE THE CASE IS LABOR INTENSIVE AND SUBJECT TO POOR QUALITY AND EXCESSIVE SCRAP GENERATION.

5 84 4511
DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS

SODIUM HYDROXIDE IS PRESENTLY USED TO NEUTRALIZE NITRIC ACID IN WEAK ACETIC ACID PRIOR TO ITS PRIMARY DISTILLATION AND IN THE FINAL SLUDGE TO KILL THE WASTE RDX. A BY PRODUCT OF THIS REACTION IS A LOW GRADE SODIUM NITRATE.

5 84 4520
PRESS LOADING PROJECTILE 105MM HEAT-MP-T, XM815

THE 105MM XM815 WILL BE THE FIRST TANK ROUND TO USE A PRESSED SHAPED CHARGE. A PRODUCTION PROCESS FOR PRESS LOADING MUST BE ESTABLISHED EVALUATING SEVERAL CANDIDATE EXPLOSIVES AND ESTABLISHING TOOLING DESIGN AND PRESSING PARAMETERS.

5 84 4523
RAPID MOISTURE ANALYSIS OF EXPLOSIVE MIXES

PRESENT MOISTURE ANALYSIS TECHNIQUE REQUIRES SOME 3 3/4 HOURS PER SAMPLE. IN AN AUTOMATED BACKLINE, THIS IS TOO LONG A PERIOD TO WAIT RELATIVE TO AN ACCEPTANCE/REJECTION DECISION FOR THE BATCH.

5 84 4524
AUTOMATED MELT POUR EQUIPMENT FOR SMALL AP MINES

CURRENT EXPLOSIVE LOADING OF SMALL AP MINES IS ACHIEVED BY HIGHLY LABOR INTENSIVE OPERATIONS. LARGE VOLUME TECHNIQUES ARE NOT APPLICABLE BECUASE OF LOW PLANNED PRODUCTION QUANTITIES.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4534
M855 BULLET CONVERSION OF SCAMP EQUIPMENT

AN AMERICANIZED VERSION OF BELGIUM SS-109 WILL BE USED IN THE SAW SYSTEM. THIS EFFORT IS DIRECTED TOWARD DEVELOPMENT OF CONVENTIONAL PROCESSES TO MASS PRODUCE SAWS AMMUNITION ON SCAMP EQUIPMENT.

5 84 4539
AUTOMATED CARTRIDGE CASE HARDNESS MEASUREMENT AND CONTROL

MANUAL MEASUREMENTS BY SAMPLING METHODS ARE INADEQUATE AND COSTLY.

5 84 4540
CACO3 COATING OF 7.62MM BALL PROPELLANT

A SAFE AND EFFICIENT PROCESS IS NOT CURRENTLY AVAILABLE FOR THE COATING OF 7.62MM BALL PROPELLANT WITH CALCIUM CARBONATE.

5 84 4541
HIGH SPEED INSPECTION OF SAA PRIMED CASES

LACQUER INSPECT AT GAGE + WEIGH IS BEING ELIMINATED. THE PRIMER INSERT SUBMODULE CURRENTLY INSPECTS FOR PRIMER ANVIL WITH A PROBE. TO IMPROVE EFFICIENCY, A BACK-UP INSPECTION IS DESIRED CAPABLE OF BEING INSTALLED ON EXISTING EQUIPMENT.

5 84 4544
THIRD GENERATION DYNAGUN (GAMMA) TO SIMULATE TANK GUNS

STANDARD BALLISTIC EVALUATION TESTS ARE THE ONLY MEANS AVAILABLE FOR ASSESSING PROPELLANTS FOR HIGH PRESSURE/HIGH VELOCITY SYSTEMS SUCH AS THE 105MM AND 120MM TANK GUNS. THESE PROCEDURES ARE VERY EXPENSIVE AND TIME CONSUMING.

5 84 4547
PROCESS TECHNOLOGY FOR XM76 IR SCREENING GRENADE

NEW IR SMOKE SCREENING TECHNOLOGY NEEDED.

5 84 4548
PYRO SAFETY ENHANCEMENT

PYROTECHNIC MIXING REQUIRES INCREASED PERSONNEL SAFETY FEATURES.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4550
AUTOMATED ASSEMBLY OF M22 FLASH SIMULATOR

ITEM MANUFACTURED AT LONGHORN AAP ON HAND LINE WHICH IS A LABOR INTENSIVE OPERATION. ITEM ALSO MANUFACTURED BY PRIVATE INDUSTRY.

5 84 4556
ON-LINE MONITORS F/WATER POLLUTANTS GENERATED BY MFR OF EXPL

AAPS DISCHARGES ARE HAZARDOUS, TOXIC AND UNIQUE TO THE MILITARY. THE LAW STIPULATES THAT ALL POLLUTANTS BE MONITORED. SPECIAL INSTRUMENTATION IS NECESSARY TO MONITOR MILITARY UNIQUE POLLUTANTS AT THE REQUIRED DETECTION LEVELS.

5 84 4563
PROCESS IMPROVEMENT FOR TANK DU PENETRATORS

CURRENT PRODUCTION PROCESSES ARE INCAPABLE OF MEETING TIME CYCLES AND QUANTITIES OF D/U PROJECTILES AS PLANNED IN FACILITIZATION STUDIES.

5 84 4570
IMPR MFS PRO TES PROC F/XM762 ARTY ELECT TIME FUZE

CRYSTAL DEFECTS CAN CAUSE CRYSTAL OSCILLATORS TO FAIL AT HIGH SETBACK FORCES. ALSO, VARIATIONS IN MAGNETIC PROPERTIES OF PARTS IN THE SETBACK GENERATOR CAN CAUSE LOW OUTPUT, AND EACH FUZE MODULE SHOULD BE TESTED AS IT IS BEING ASSEMBLED.

5 84 4574
IMPROVED PRECESS FOR RDX/HMX FINES MANUFACTURE

CURRENTLY THE HMX PRODUCED AT HOLSTON AAP IS MECHANICALLY GROUND TO THE REQUIRED SIZE FOR USE AS ROCKET PROPELLANT. THIS PROCESS IS INEFFICIENT ANB RESULTS IN HIGHER COSTS.

5 84 4578
MODIFICATION + IMPROVEMENT OF DMSO PILOT PROCESS FOR RDX/HMX

PILOT SCALE PROCESS FOR RECRYSTALLIZATION OF RDX/HMX FROM DMSO WAS DESIGNED, PROCURED AND INSTALLED AT HAAP, INSUFFICIENT DATA OBTAINED TO YIELD OPTIMIZED OPERATING CONDITIONS.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4579
WHITE WATER RECOVERY SYS F/COMBUSTIBLE CASE MANUFACTURING

A BY PRODUCT OF FORMING COMBUSTIBLE CASES ARE WASTEWATERS CONTAINING NC FINES AND OTHER CONTAMINANTS INCLUDING DPA. THE DISCHARGE LIMIT FOR DPA IS 0.026 MG/L. ESTIMATES PLACE DPA IN WASTEWATER AT 20 MG/L OR 770 TIMES THE MAXIMUM AMOUNT PERMITTED.

5 84 4597
MFG PROC F/CANNON CALIBER DU PENETRATOR (20MM, 25MM, 30MM)

CURRENT FABRICATION TECHNIQUES FOR SMALL CALIBER DEPLETED URANIUM PENETRATORS RESULT IN EXCESSIVE SCRAP OF RADIOACTIVE CONTAMINANTS AND ARE HIGHLY LABOR INTENSIVE.

5 84 4606
AUTOMATED ASSEMBLY OF BLU 97/B COMBINED EFFECTS MUNITION

MANUFACTURE OF THE BLU-97/B ON THE HAND LINE AT KANSAS AAP IS LABOR INTENSIVE AND EXPOSES PERSONNEL TO POTENTIALLY HAZARDOUS OPERATIONS. THE HAND LINE PRODUCTION SYSTEM WILL RESULT IN HIGH UNIT COSTS AND REQUIRE A LARGE PHYSICAL ASSEMBLY FACILITY.

5 84 4626
AUTOMATED ASSEMBLY OF MILLIMETER WAVE TRANSDUCERS

PLACEMENT AND BONDING OF SMALL SEMICONDUCTOR CHIPS ONTO MICROSTRIP REQUIRES ACCURACY NOT FOUND IN TODAY?S PICK-AND-PLACE EQUIPMENT.

5 84 4657
BINARY FACILITY MONITORING AND DETECTION

A RAPID AND SENSITIVE MEANS OF DETECTING METHYL PHOSPHORIC DIFLUORIDE (DF) WHICH WILL AVOID GENERATION OF THE TOXIC GB IS ESSENTIAL TO THE SAFE OPERATION OF THE INTEGRATED BINARY PROD FAC AT PINE BLUFF ARSENAL.

5 84 4663
REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER

THE PLANNED TYPE II COMPOSITION A-3 USES BARIUM CHLORIDE AS AN EMULSION BREAKER. FREE BARIUM IONS ARE EXTREMELY TOXIC. FEDERAL AND STATE REQUIREMENTS PERMIT ONLY UP TO 1 MG/L FREE BARIUM IN DRINKING WATER. HENCE, TREATMENT OF EFFLUENT REQUIRED.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

5 84 4664
RADIOLOGICAL INSPECTION OF AMMUNITION FOR THE SGT YORK

40MM SGT YORK PROJECTILE HAS A REQUIREMENT FOR CONVENTIONAL RADIOGRAPHIC INSP TO MINIMIZE THE PRESENCE OF CRITICAL DEFECTS. THE PROPOSED FILM RADIOGRAPHY IS LABOR INTENSIVE AND COSTLY.

5 84 4665
COMPUTER SIMULATION OF DU QUENCHING

EXCESSIVE BOW IS A MAJOR MANUFACTURING PROBLEM. THE BOW CONDITION FOR DU PENETRATORS IS A RESULT OF THE QUENCHING OPERATION. WITH LONGER AND THINNER FUTURE GENERATION PENETRATORS RESULTANT RESIDUAL STRESSES WILL REQUIRE AN ADJUSTMENT OF THE QUENCHING

5 84 4667
CONTINUOUS RECOVERY AND PURIFICATION OF MDU SCRAP

NO ECONOMICAL PROCESS EXISTS TO RECYLE DEPLETED URANIUM CHIPS IN TO USEFUL PRODUCTS.

5 84 4668
ELECTROSTATIC PRECIP IMPROVEMENTS (SMOG HOG)

THE SMOG HOGS AT MSAAP AND SAAP HAVE BOTH HAD FIRES WITH EXTENSIVE DAMAGE. IMPROVEMENTS WERE MADE TO THEIR FIRE SUPPRESSION SYSTEM. HOWEVER, DETERMINING AND ELIMINATING THE CAUSE OF THE FIRES HAS NOT BEEN STUDIED.

5 84 4773
120MM COMBUSTIBLE CASE BODY REMOVAL SYSTEM

A POTENTIAL SAFETY PROBLEM CURRENTLY EXISTS IN THE COMBUSTIBLE CASE MOLDING AREA ON THE 120MM LINE. THE REMOVAL OF THE CASE BODY FROM THE MALE PRESSING MANDREL IN THIS AREA IS A HAZARDOUS STEP IN THE PRODUCTION OF THE 120MM CASE BODIES.

AMCCOM (WPNS)

6 84 7985
SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY

GUN BARREL MFG PROCEDURES REFLECT ANTIQUATED TECHNOLOGY AND RELY ON MASS REMOVAL OF MATERIAL BY CONVENTIONAL MACHINING METHODS. CURRENT EQUIP REPRESENTS 1940-50 TECHNOLOGY. NEW MATERIALS COMPOUND THE PROBLEM.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

6 84 8103
HIGH VELOCITY MACHINING

SPEED OF MACHINING CANNON TUBES IS LIMITED WITH CURRENT EQUIPMENT.

6 84 8153
INCREASING GUN TUBE HEAT TREATMENT CAPACITY

OIL-FIRED SELAS CONTINUOUS HEAT TREATING CANNOT MEET THE PRODUCTION CAPACITY OF THE ROTARY FORGE. THE OUTPUT OF THE HEAT TREAT LINE MUST BE INCREASED THREE-FOLD TO MEET MOBILIZATION REQUIREMENTS.

6 84 8154
COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNONS

NUMERICAL CONTROL MACHINE TOOLS OFFER MANY ADVANTAGES OVER CONVENTIONAL MACHINE TOOLS BUT HAVE CERTAIN DISADVANTAGES. ONE PROBLEM AREA IS GETTING MACHINE INSTRUCTIONS TO THE MACHINE TOOL AND COLLECTING MANAGEMENT INFORMATION.

6 84 8231
IMPROVED CASTING TECHNOLOGY

EXCESSIVE METAL MUST BE MELTED IN CASTING OPERATIONS. THE YIELD RATIO OF SOME CASTS IS TOO LOW AND THE GATES AND RISERS TOO DIFFICULT TO CUT OFF. MATERIAL PROPERTIES OFTEN VARY WITH CASTING PROCEDURES.

6 84 8241
COMPUTER DIAGNOSTICS + CONTROL APPL TO BORE GUIDANCE (CAM)

THE BORE GUIDANCE SYSTEM CONSISTS OF MANY INTERDEPENDENT ELEMENTS MAKING IT DIFFICULT AND TIME CONSUMING TO DIAGNOSE PROBLEMS. ALSO, TUBES WITH LARGE WALL VARIATIONS GREATLY INCREASE THE DIFFICULTY IN MAINTAINING CONTROL.

6 84 8249
SHORT-CYCLE HEAT TREATMENT OF WEAPON COMPONENTS

HEAT TREATING SOAK TIMES ARE DETERMINED WITHOUT CONSIDERATION OF THE RELATIONSHIPS BETWEEN COMPOSITION, CONFIGURATION, THICKNESS, AND DETRIMENTAL EFFECTS OF AUSTENITIC GRAIN GROWTH. CONSEQUENTLY, CONSIDERABLE ENERGY IS WASTED.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

6 84 8250
IMPROVED FABRICATION OF RECOIL WEAR SURFACES

PRESENTLY GRINDING AND HONING OPERATIONS ON WEAR SURFACES RESULT IN PARTICLE INCLUSIONS WHICH COME IN CONTACT HYDRAULIC FLUID AND PRODUCE HIGH RATES OF WEAR.

6 84 8262
PRODUCTION METHODS FOR OPTICAL WAVEGUIDES

MANUFACTURE OF INTEGRATED WAVEGUIDES IS COMPLICATED AND TIME CONSUMING INVOLVING PROCESSES RELATED TO METHODS USED TO MAKE SEMICONDUCTOR INTEGRATED CIRCUITS.

6 84 8305
INTEGRATED MANUFACTURING SYSTEM (IMS) (CAM)

MI SYSTEMS ARE APPLIED LOCALLY BUT THERE IS NO DATA MANAGEMENT SYSTEM FOR THE ENTIRE MFG ACTIVITY. THIS INCREASES COST DUE TO LONG LEAD TIMES, SCHEDULE INTERRUPTIONS AND SHORTAGES OF MACHINE AVAILABILTY, LABOR AND MATERIAL.

6 84 8306
ON-LINE PRODUCTION IMFORMATION SYSTEM - RIA (CAM)

THE MANUFACTURING DATA BASE CANNOT BE ACCESSED THROUGH AN ON-LINE DATA BASE SYSTEM, MAKING INTEGRATION OF AUTOMATED SYSTEMS FOR PROCESS PLANNING,TIME STDS GENERATION, FACILITIES/MOBILIZATION PLANNING AND PRODUCTION CONTROL SIMULATION DIFFICULT.

6 84 8323
SPRAY-AND-FUZE PROCESSING OF ARMAMENT COMPONENTS

MISMATCHED AND WORN WEAPON COMPONENTS ARE NOT ONLY COSTLY TO REPLACE BUT SHORTAGE OF STRATEGIC MATERIALS IMPACT ON THE SUPPLY AND FABRICATION OF NEW COMPONENTS.

6 84 8324
PROCESS CONTROLS FOR P/M WEAPON COMPONENTS

PRESENT METHODS OF PRODUCING WEAPON COMPONENTS IS MAINLY BY MACHINING FROM WROUGHT STOCK. THIS IS A HIGH COST METHOD WHICH PRODUCES MUCH ALLOY STEEL SCRAP.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

6 84 8326
APPLICATION OF CORROSION RESISTANT COATINGS

CURRENT METAL FINISHES DO NOT PROVIDE ADEQUATE CORROSION AND HEAT RESISTANCE. COMPONENTS ARE REPLACED OR REWORKED BEFORE THEIR INTENDED LIFE. FREQUENT MAINTENANCE IN THE FIELD AND DEPOTS ADD TO THE OVERALL COST OF THE COMPONENTS.

6 84 8329
FIRE CONTROL OPTICAL DEVICES NEW PROCESS PRODUCTION TECH

PRODUCTION DELAYS AND COST OF REWORKS HAVE BEEN A GREAT LOGISTICS PROBLEM. THERE HAS BEEN A SIGNIFICANT SHORTFALL IN PRODUCTION CAPABILITY.

6 84 8370
AUTO INSP AND PROC CONTROL OF WPNS PARTS MFG

FOR BARREL MRG, CURRENT HAND GAGED INSPECTION IS A MAJOR TIME FACTOR. BARREL STRAIGHTENING IS ALSO DONE MANUALLY AS MANY AS 13 TIMES DURING THE MFG CYCLE. NEW DNC EQUIP BEING PROCURED VIA PIF 68X7986 REQUIRES CENTRAL CONTROL.

6 84 8402
WARM FORGING FOR WEAPON COMPONENTS

EXCESSIVE ENERGY IS CONSUMED IN CONVENTIONAL FORGING. ALSO DIE LIFE IS SHORTENED BY HIGH FORGING TEMPERATURES AND BY OXIDATION.

6 84 8403
DESIGN CRITERIA FOR HARDENING (CAD/CAM)

SELECTION OF THE BEST HARDENING PROCESS. INCOMPLETE HARDENING THROUGHOUT THE COMPONENT AND COMPLICATIONS CAUSED DURING THE HEAT TREATMENT OF WELDMENTS ARE RECURRING PROBLEMS CURRENTLY ADDRESSED BY EMPIRICAL METHODS.

6 84 8416
FLEXIBLE MFG SYSTEMS W/SPECIAL TOOLING

FLEXIBLE MACHINING SYSTEM (FMS) TECHNOLOGY OFFERS MANY ADVANTAGES TO PLANTS THAT MANUFACTURE PARTS ON LOW TO MID VOLUME QUANTITIES. HOWEVER, ESTABLISHING FEASIBILITY, PURCHASING, AND IMPLEMENTING FMS IS WIDE IN SCOPE AND VERY COMPLEX.

PROJECTS ADDED IN 1ST HALF, CY84
(CONTINUED)

6 84 8417
FACTORY INFORMATION MANAGEMENT - RIA (CAM)

THE EXCHANGE OF INFORMATION WITHIN THE ROCK ISLAND ARSENAL MANUFACTURING ORGANIZATION IS BY HARDCOPY REPORTS. THE GENERATION OF MANUFACTURING MANAGEMENT REPORTS IS LABOR INTENSIVE AND ERROR PRONE.

6 84 8426
APPLICATION OF LASERS TO CANNON MANUFACTURE

COMPONENT MARKINGS, TOOL MAINTENANCE, COMPONENT SURFACE HARDENING, CUTOFF OF INVESTMENT CAST COMPONENTS, WELDING AND BRAZING ARE DIFFICULT, COSTLY, TIME CONSUMING MANUFACTURING OPERATIONS.

6 84 8430
AUTOMATED WELDING OF ROTARY FORGE HAMMERS

CURRENT METHOD TO WELD A WEAR RESISTANT OVERLAY ON ROTARY FORGE HAMMERS IS A TIME CONSUMING, MANUAL PROCESS. QUALITY DEPENDS ON OPERATOR SKILL.

6 84 8431
AUTOMATED WELDING OF BORE EVACUATORS

PRESENT PROCEDURE DOES NOT ENABLE WELDING BORE EVACUATORS INSIDE AND OUTSIDE SIMULTANEOUSLY. THUS, ENERGY AND TIME ARE WASTED.

6 84 8433
IN PROCESS CONTROL OF SELAS HEAT TREAT SYSTEM (CAM)

AS GUN TUBES ARE HEAT TREATED THE ACTUAL WORKPIECE TEMPERATURE IS NOT KNOWN UNTIL THE PIECE EXITS THE FURNACE. EXCESSIVE FORGING TEMPERATURES CAN DEGRADE MECHANICAL PROPERTIES.

6 84 8434
EDDY CURRENT INSPECTION OF GUN TUBES

THE CURRENT GUN TUBE PRODUCTION ID INSPECTION TECHNIQUES, BORESCOPE AND MAGNETIC PARTICLE, ARE SLOW AND SUBJECT OPERATOR ERROR. THESE TECHNIQUES DO NOT HAVE THE CAPABILITY TO PRODUCE PERMANENT RECORDS OF FLAW LOCATIONS.

6 84 8436
QUENCH CYCLE PROFILE MEASUREMENT SYSTEM

THE QUENCH CYCLE DURING HEAT TREAT PLAYS AN IMPORTANT PART IN THE QUALITY OF GUN TUBE FORGINGS. QUENCH CRACKS HAVE BEEN OCCURING IN THE MUZZLE END OF 105 MM ROTARY FORGED GUN TUBES. THE CURRENT QUENCH CYCLE HAS LITTLE OR NO CONTROL.

6 84 8437
DENSIFICATION OF WEAPON CASTINGS (HIP)

CASTINGS FOR WEAPONS COMPONENTS OFTEN CONTAIN EXCESSIVE SHRINKAGE CAVITIES AND VOIDS, RESULTING IN REJECTION OR COSTLY WELD REPAIR.

6 84 8439
IMPROVED RIFLING PROCEDURES

RIFLING HEADS USED TO HOLD BROACH CUTTERS IN THE RIFLING OPERATION ARE SUBJECT TO EXCESSIVE WEAR, NECESSITATING SIGNIFICANT MAINTENANCE AND REPAIR EXPENDITURE.

6 84 8473
APPL FUSED SALT PROCESS TO COAT TANTALUM ON L CAL LINERS

PRESENTLY NO FULL SCALE PRODUCTION CAPABILITY EXISTS AT WATERVLIET ARSENAL TO APPLY TANTALUM TO THE I. D. OF LARGE LINERS. THESE COATINGS MUST BE DEPOSITED FROM A FUSED SALT BATH.

6 84 8474
APPL OF PARTIAL REFRACTORY LINERS TO CANNON TUBES

FUTURE CANNON TUBES WILL BE SUBJECTED TO HIGHER TEMPERATURE, PRESSURE AND VELOCITY. TUBES AS NOW DESIGNED WILL WEAR OUT MUCH FASTER. PROTOTYPE EQUIPMENT TO INSTALL ADVANCED TECHNOLOGY LINERS IN TUBES NOW EXISTS.

TROSCOM

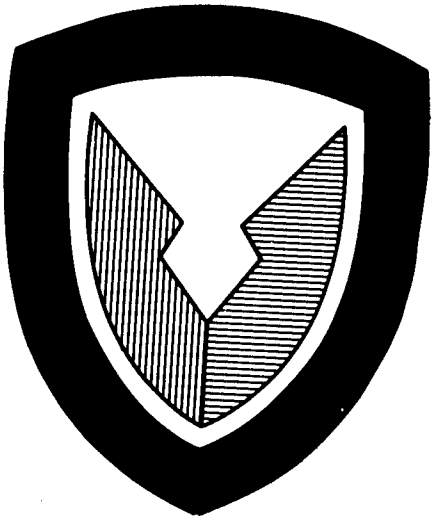
E 84 3796
COMBAT VEHICLE DEPERMING PRODUCTION FACILITY

PRESENT DESIGN AND FABRICATION TECHNIQUES FOR VEHICLES RESULT IN A SIGNIFICANT MAGNETIC SIGNATURE. THIS MAGNETIC SIGNATURE CAN BE USED TO FUZE LAND MINES TO ATTACK THE VEHICLE UNDERCARRIAGE.

TOTAL PROJECTS ADDED IN 1ST HALF, CY84 133

MMT PROGRAM

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84



FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84

ERADCOM

H 80 3010
MILLIMETER-WAVE SOURCES FOR 60, 94, AND 140 GHZ

PILOT LINE DEMONSTRATION CONSISTED OF 22 EPI RUNS YIELDING 14 LOTS, 12 OF WHICH PRODUCED 80 PACKAGED DIODES. 40 OF THOSE MET POWER REQUIREMENTS AND 21 MET BOTH POWER AND FREQUENCY REQUIREMENTS. UNIT COST REDUCED FROM 400 TO 60 DOLLAR AT 1000 PER MON.

H 81 3505
HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING

THE TECHNICAL ACHIEVEMENTS OF THIS PROJECT ARE- REPEATABLE UNIFORM PHOSPHOR SPUTTERING ON CRT FACEPLATE, LIGHT ABSORBING LAYER THICKNESS REDUCTION, REPRODUCIBLE FACEPLATE TO ENVELOPE FRIT SEALING AND TRIPLING OF RED LUMINANCE.

H 82 3505
HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II

THIS PROJECT IS BEING CLOSED OUT BECAUSE OF INSUFFICIENT PROGRESS IN PHASE I.

H 82 5019
LASER-CUT SUBSTRATES FOR MICROWAVE TUBES

15 S-BAND AND 15 C-BAND ANODE CIRCUITS WERE COMPLETED. FABRICATION WORK INVESTIGATED VARIOUS SEQUENCES OF BERYLLIA SUBSTRATE METALIZATION, CO2 LASER CUTTING OF SUBSTRATE OR METALIZATION AND TUNGSTEN-COPPER COEXPANSIVE GROUND PLANE BRAZING AND SUPPORT

H 83 5151
LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MODULE DET ARRAYS

SANTA BARBARA RESEARCH AND TEXAS INSTRUMENTS DID 5-MONTH ANALYSIS OF COST + YIELD DRIVERS, GROWTH OF CADMIUM TELLURIDE BOULES AND LIQUID PHASE EPITAXY OF MERCURY FILM. FIRMS PAID FOR FACILITIES PREPARATION AND PILOT LINE EQUIPMENT.

H 83 5162
EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II

PROCUREMENT PACKAGE DELIVERED TO CONTRACT BRANCH ON 16 FEB 84. RFP MAILED OUT 24 APR 84. CONTRACTOR PRICE PROPOSAL RECEIVED AND EVALUATED TECHNICALLY AS OF 28 JUN 84. CONTRACT AWARD EXPECTED TO BE ON SCHEDULE. THIS WILL OCCUR IN FY84 FOLLOW-ON PROJ.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84 (CONTINUED)

F 83 5168
AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE I

KLA INSTRUMENTS COMPLETED PHASE I OF THIS PROGRAM, AND IS NOW MARKETING A .5 MICRON FEATURE SIZE DIE-TO-DIE INSPECTION SYSTEM WITHGOOD OPTICS, RESOLVING CAPABILITY AND SIGNAL PROCESSING CAPACITY. THIS CAN INTERMEDIATE DIE-TO-DIE INSP. SYSTEM.

F 83 5180
MMT FOR METAL DEWAR AND UNBONDED LEADS

HONEYWELL AND SBRC COMPLETED THEIR PRODUCIBILITY ANALYSIS, IDENTIFIED MAJOR COST DRIVERS AND FABRICATED 4 ENGINEERING SAMPLES EACH FOR THEIR NEW DEWAR DESIGN. HONEYWELL MADE 2 GLASS AND 2 METAL DEWARS WHILE SBRC MADE ALL METAL DEWARS.

2 77 9805
AUTO MICROCIRCUIT BRIDGE RDN MEASURE OF QUARTZ CRYSTALS

HUGHES BUILT AN AUTOMATIC MICROCIRCUIT BRIDGE (AMB) MEASURING SET FOR MEASURING QUARTZ CRYSTAL PARAMETERS. SYSTEM REPLACES CRYSTAL IMPEDANCE METERS + HAS CAPABILITY OF MEASURING 25 CRYSTALS PER DAY.

F 79 9805
QUARTZ CRYSTAL PARAMETER TESTING

FOLLOW-ON TO 2 77 9805. HUGHES EXPANDED CAPACITY OF PREVIOUS AMB MEASURING SET TO 200 CRYSTALS PER DAY. CRYSTAL PARAMETERS TESTED INCLUDED FREQUENCY, MOTIONAL RESISTANCE AND CAPACITANCE, SPURIOUS MODES, TEMPERATURE CYCLING AND AGING.

AMMRC

M 78 6350 2226
AIR FLOW TEST EQUIPMENT

THE TECHNICAL WORK FOR THE AIR FLOW TEST EQUIPMENT HAS BEEN COMPLETED. THE INTERFACE CIRCUITRY FOR CONTROLLING THE VALUES AND SENCING SYSTEM WAS COMPLETED. A PERMANENT FRAMEWORK TO SUPPORT THE SYSTEM PIPING WAS ALSO COMPLETED.

M 79 6350 2430
ACCEPT TESTER FOR COMMON MODULE SCANNER PERFORMANCE

THE TECHNICAL WORK FOR THE DEVELOPMENT OF COMMON MODULE SCANNER PERFORMANCE ACCEPTANCE TESTER HAS BEEN COMPLETED. THIS TEST EQUIPMENT WILL BE RETAINED BY NVEOL OR GFE TO A COMMON MODULE MANUFACTURE FOR ACCEPTANCE TESTING.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84
(CONTINUED)

M 79 6350 2433
POWER SUPPLY TEST CONSOLE FOR 2ND GEN IMAGE INTENSIFIE

THE TECHNICAL WORK FOR THE AUTOMATIC UNIVERSAL HIGH VOLTAGE POWER SUPPLY TEST CONSOLE FOR 2ND GENERATION TUBES HAS BEEN COMPLETED. THE SYS IS CAPABLE OF TESTING 2ND AND 3RD GENERATION POWER SUPPLIES IN PROD. THE SYS WILL BE GFE TO K+M ELECTRONICS.

M 79 6350 2450
GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT

SEE PROJECT M 80 6350-2450 FOR STATUS.

AVSCOM

1 81 7285
CAST TITANIUM COMPRESSOR IMPELLERS

WORK COMPLETED AND AWAITING FINAL TECHNICAL REPORT.

1 81 7291
TITANIUM POWDER METAL COMPRESSOR IMPELLER

RECENT CONSOLIDATION AND TOOLING INSPECTION INDICATES PROGRAM BACK ON TARGET. THIS COMPLETES FY81 FUNDED WORK. WORK CONTINUES UNDER FY82 FUNDING.

1 82 7300
IMPROVED LOW CYCLE FATIGUE CAST ROTORS

PILOT PRODUCTION COMPLETED. INSPECTION OF ROTORS IS IN PROGRESS. PREPARATION FOR TEST PROGRAM IS UNDERWAY.

1 82 7371
INTEGRATED BLADE INSPECTION SYSTEM (IBIS)

SEE PROJECT 1 84 7371 FOR STATUS.

1 82 7382
LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A

PHASE I WORK WAS COMPLETED. AN END OF PROJECT BRIEFING WAS HELD AT THE BLACKHAWK PMO OFFICE. THE WORK WAS SUCCESSFUL IN DEMONSTRATING THAT A PRE-CURE SPAR APPROACH WILL BE PURSUED INTO PHASE II AND WILL RESULT IN 30 PERCENT COST SAVINGS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84
(CONTINUED)

1 83 7389
PRODUCTION OF ALUMINUM AIRFRAME COMP (SUPERPLASTIC FORMING)

PROJECT HAS BEEN COMPLETED. FUTURE WORK TO BE ACCOMPLISHED UNDER PROJECT 1847389.

1 82 7412
INFRARED DETECTOR FOR LASER WARNING RECEIVER

PERKIN-ELMER CORP DEMONSTRATED A PRODUCTION RATE OF 60 DETECTORS PER 40 HOUR WEEK AT A 28 PCT YIELD. THESE IR DETECTORS ARE PART OF THE AN/AVR-2 LASER WARNING RECEIVER. THE INDIUM-ARSENIDE IS DEFINED IN AN INTERDIGITATED PATTERN.

MICOM

3 81 1042
PRODUCTION OF COMPOSITE RADOME STRUCTURES

THE ROGERS CORP ALL-FLUOROPOLYMER CONTINUOUS FILAMENT REINFORCED RADOME EXHIBITED GOOD MECHANICAL INTEGRITY, DIELECTRIC PROPERTIES AND RESISTANCE TO RAIN EROSION. ITS COST IS LESS THAN THE COST OF CURRENT PDN PERSHING II RADOME. PROJ STATUS-COMPLETE.

3 81 1051
REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS

ALL WORK HAS BEEN COMPLETED. WORK ON THE EFFORT IS CONTINUING UNDER PROJECT 3 83 1051. THE WORK COMPLETED WITH THIS PROJECT RESULTED IN THE SELECTION OF PROMISING CANDIDATE FOR REPLACING ASBESTOS IN INSULATION AND INHIBITOR APPLICATIONS.

3 82 1060
ELECTRICAL TEST AND SCREENING OF CHIPS

DETERMINATION THAT STATE-OF-THE-ART CAN PRODUCE TEST MACHINE FOR MANUFACTURE AND ASSEMBLY. PROPOSED MACHINE DESIGN IS COMPLETED. FEATURES INCLUDE 60 TEST PROBES, TEMPERATURE PROFILE FROM -55C TO + 122C, SORTING BY TEST RESULTS, 900 DIES PER HOUR RATE

3 82 1073
REAL TIME ULTRASONIC IMAGING

THIS PROJECT HAS BEEN COMPLETED. INDUSTRY DEMONSTRATION WAS HELD IN NOV 1983. THE MOTION PICTURE WAS DELIVERED IN DEC 1983. THE FINAL REPORT WAS PUBLISHED IN FEB 1984.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84
(CONTINUED)

3 83 1089
INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS

THE TECHNICAL EFFORT FOR THIS PHASE OF THE PROGRAM HAS BEEN COMPLETED. AN INTERIM PROJECT REPORT HAS BEEN PREPARED AND IS CURRENTLY BEING EDITED FOR PUBLICATION.

3 82 1108
RF AND LASER HARDENING OF MISSILE DOMES

BATTELE NW DEMO THAT REACTIVE MAGNETRON SPUTTERING COULD COAT PLASTIC MISSILE DOMES FOR RF SHIELDING. BATTELLE COLUMBUS SHOWED THAT A METAL SCREEN OR THIN FILM GRID WOULD ALSO WORK. BUT A MULTILAYER COATING IS STILL NEEDED FOR LASER SHIELDING.

3 82 1109
ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM

TASK I AND II OF THIS EFFORT HAVE BEEN COMPLETED. TASK I PRODUCED DESIGN EVALUATION DRAWINGS FOR A FULLY AUTOMATIC ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM. PHASE II PRODUCED THE COMPLETE DETAIL DESIGN DRAWINGS FOR THE SYSTEM.

3 82 1121
MISSILE MANUFACTURING PRODUCTIVITY IMPROVEMENT PROGRAM

THIS IMIP PROJECT WAS CANCELLED BY MICOM PER HIGHER HEADQUARTERS DIRECTION. THE TRI-SERVICE EFFORT WAS TO CONTRACT WITH MARTIN MARIETTA TO ANALYZE THEIR SUBCONTRACTORS' MANUFACTURING PLANNING TO FIND PRODUCTIVITY IMPROVEMENTS.

3 82 1126
WOUND ELASTOMER INSULATOR PROCESS

THE ELASTOMER, EPDM/HALO-HC, WAS SELECTED TO FABRICATE THE MOTOR CASE INSULATOR. A FULL-SCALE PERSHING II FIRST STAGE CASE WAS MADE PER STANDARD SPECS EXCEPT THAT THE CASE WAS WOUND OVER THE UNCURED INSULATOR AND THE WHOLE ASSY COCURED IN ONE STEP.

3 83 1126
WOUND ELASTOMER INSULATOR PROCESS

FABR WAS COMPLETED ON ANOTHER FIRST STAGE CASE AND A SECOND STAGE CASE. HYDROBURST TESTING ON BOTH STAGES REVEALED EXCELLENT INTEGRITY AT -35, 77, AND 135 DEGREES F. THE WOUND INSULATOR/COCURE PROCESS DOES NOT DEGRADE STRENGTH OR CHAR PROPERTIES.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84
(CONTINUED)

3 81 3263
PRINTED WIRING BOARDS UTILIZING LEADLESS COMPONENTS

FOLLOW-ON TO 3 80 3263. HUGHES OPTIMIZED TECHNIQUES FOR ATTACHING LEADLESS CHIP CARRIERS (LCC) TO MODIFIED POLYIMIDE-KEVLAR PRINTED CIRCUIT BOARDS. TASKS WERE LCC PRETINNING, VAPOR PHASE SOLDERING, CONFORMAL COATING, + ENVIRONMENTAL TESTING.

R 80 3376
TESTING OF ELECTRO-OPTICAL COMPONENTS AND SUBSYSTEMS

THIS PROJECT HAS BEEN COMPLETED. THE TECHNICAL REPORT HAS BEEN PUBLISHED. FOR ADDITIONAL INFORMATION CONTACT, W FRIDAY, 205-876-8611.

3 82 3411
NON-PLANAR PRINTED CIRCUIT BOARDS

TASK I DISH ANTENNA- ACCOMPLISHED ACCURACY OF 1/100 WAVELENGTH AND 0.001 THICK ADDITIVE PLATING. TASK II CYLINDRICAL BOARD- MATERIAL SELECTION, FORMING + TOOLING WERE DEFINED AND SAMPLE FABRICATION COMPLETED. TECH REPORT NO M-24-6-1161 WAS SUBMITTED.

R 79 3441
APPLICATION OF HIGH ENERGY LASER MANUFACTURING PROCESSES

WORK COMPLETED.

TACOM

T 78 4264
TRACK INSERTS AND FILLERS FOR TRACK RUBBER PADS

TORSION TEST MACHINE HAS NOW BEEN DESIGNED AND FABRICATED. TRACK RUBBER SPECIFICATION MIL-T-11891 HAS BEEN CHANGED TO ENCOMPASS ALL RECENT AND FUTURE IMPROVEMENTS IN TRACK RUBBER COMPOUNDS. FINAL TECH REPORT WRITTEN AND PUBLISHED.

T 82 5005
COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE I)

PHASE I OF THIS EFFORT HAS BEEN COMPLETED. THIS INCLUDED OBTAINING GEOMETRY OF THE SPUR AND HELICAL GEARS FROM KINEMATICS OF THE HOBBING/SHAPER MACHINES AND CUTTER. ANALYSIS OF FORGING LOADS WAS DONE USING BOTH SLAB AND FINITE ELEMENT METHODS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84
(CONTINUED)

T 81 5054
LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS

THIS PROJECT HAS BEEN COMPLETED. TECHNICAL REPORT NO. 12727 WAS PUBLISHED AND DISTRIBUTED IN JANUARY 1983.

T 81 5068
NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE II)

PROJECT WORK WAS COMPLETED. SALT SPRAY TESTS DEMONSTRATED THE SUPERIORITY OF THE GALVANIZED SHEET OVER THE CURRENT SYSTEM. A 20,000 MILE ROAD TEST DETERMINED THE STRUCTURAL INTEGRITY OF THE SYSTEM. FIELD CORROSION TESTING WILL CONTINUE IN 4 83 5068.

T 82 5090
IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE IV)

DATA COLLECTION COMPLETED + HANDBOOKS 3 FINAL REPORT DELIVERED. CONT ASSISTED GOVT CONTRACTORS WITH MACHINING PROBLEMS. CONTRACTOR ANALYZED SOME SPECIAL ARMOR MATL FOR ITS MACHINING CHARACTERISTICS + PUBLISHED A REPORT.

T 81 5091
HEAVY ALUMINUM PLATE FABRICATION (PHASE I)

ALUMINUM ARMOR PLATE AND WELDING ELECTRODES HAVE RECEIVED. ARMOR PLATE HAS BEEN CUT TO WORK SIZE ON THE NEWLY DESIGN HOLDING FIXTURES AND TO CONFIGURATION OF NEW WELD JOINT DESIGN. THE PLASMA TORCH IS ERRATIC IN OPERATION.

T 81 6059
M2 AND M3 FIGHTING VEHICLE SYSTEM

THE FINAL DESIGN HAS BEEN ESTABLISHED + PATTERN + MOLD COMPLETED. FABRICATION PROCESSES HAVE BEEN OPTIMIZED + PROTOTYPE VANES COMPLETED. QUALITY ASSURENCE REQUIREMENTS HAVE BEEN FORMULATED + LABORATORY TESTING OF PROTOTYPES COMPLETED.

T 81 6059 04
RESIN MOLDED COMPOSITE MATERIALS

LABORATORY TESTING OF PROTOTYPES WAS COMPLETED. A FINAL REPORT WITH AN ECONOMIC ANALYSIS WAS COMPLETED AND DISTRIBUTED AS OF MARCH 1984. BENEFITS ARE A SAVINGS OF $200 PER MOLDED TRIM VANE. A VEP HAS BEEN SUBMITTED TO IMPLEMENT THIS TECHNOLOGY.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY84 (CONTINUED)

AMCCOM (WPNS)

6 77 7201
ARTILLERY WEAPON FIRING TEST SIMULATOR

THIS PROJECT IS COMPLETE. A HYDRAULIC SIMULATOR WAS DEVELOPED, FABRICATED, AND INSTALLED. CURRENTLY IT IS BEING USED FOR PRODUCTION ACCEPTANCE TESTING FOR GUN MOUNTS.

6 77 7753
NOISE SUPPRESSOR F/POWDER TYPE RECOIL MECHANISM TEST MACHINE

THE EQUIPMENT IS CURRENTLY BEING INSTALLED. ALTHOUGH NOISE LEVELS WERE NOT REDUCED AS MUCH AS SPECIFIED IN THE CONTRACT. A FINAL TECHNICAL REPORT IS AVAILABLE.

6 82 8113
ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS

ION VAPOR DEPOSITION PLANT SET-UP AND OPERATION PROCEDURES WERE ESTABLISHED. FINAL COATING EVALUATION AND PROCESS PARAMETERS OPTIMIZATION WERE ACCOMPLISHED. IVD AL COATING IS A VIABLE REPLACEMENT FOR CADMIUM COATING. THIS PROJECT IS COMPLETED.

TROSCOM

E 82 3592
IMPROVED GRAPHITE REINFORCEMENT

THE PILOT PLANT CURRENTLY OPERATES 24 HOURS/DAY AND IS CAPABLE OF ROUTINELY PRODUCING 3 LBS/DAY OF 6000 FILAMENT PER TOW OF GRAPHITE FIBER HAVING A TENSILE STRENGTH OF 525 KSI AND A MODULUS OF 55 MILLION PSI. THIS FINAL PROJECT PHASE IS COMPLETE.

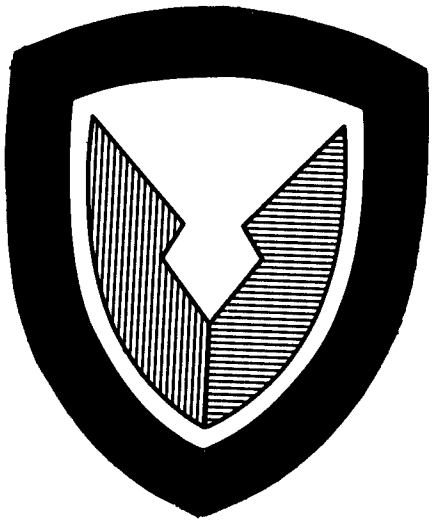
E 84 3800
NON-GUM ELASTOMER HOSES

CONTRACT PACKAGE PREPARED AND PROCESSED UP TO SOLICITATION RELEASE. THEN IT WAS DECIDED TO FUND A HIGHER PRIORITY PROGRAM INSTEAD. ALL WORK ON THIS PROJECT WAS TERMINATED IN JUNE 1984. NO NEAR TERM FUNDING REQUESTS ARE CONTEMPLATED FOR THIS EFFORT.

TOTAL PROJECTS COMPLETED IN 1ST HALF, CY84 43

MMT PROGRAM

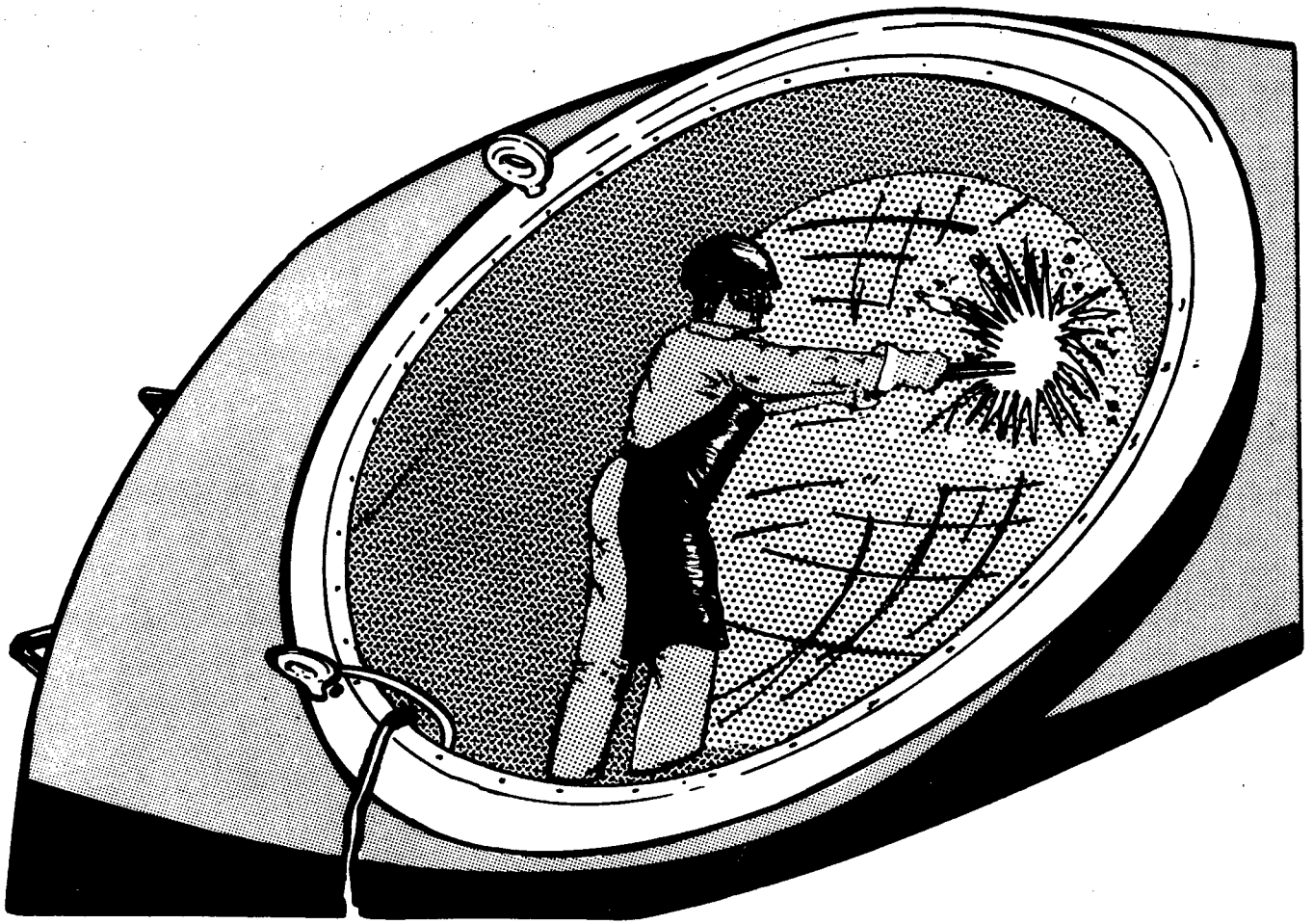
SUMMARY PROJECT STATUS REPORT



MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

SUMMARY PROJECT STATUS REPORT

The Summary Project Status Report for each major Army Subcommand (SUBMACOM) is preceded by a list of delinquent status reports. The tabulated SUBMACOM MMT project funding status has been omitted due to the high delinquency rate.



DEPOT SYSTEMS COMMAND
(DESCOM)
AND
MANAGEMENT ENGINEERING TRAINING ACTIVITY
(AMETA)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
G 83 3001		POWER AND INERTIA SIMULATOR-COMBAT VEHICLE TESTING	100
G 83 7001		AUTO DYNAMOMETER CONTROL F/STANDARDIZED INSPECT TEST (CAM)	45
*G 84 8002		ANAD SUBASSEMBLY MODERNIZATION	200

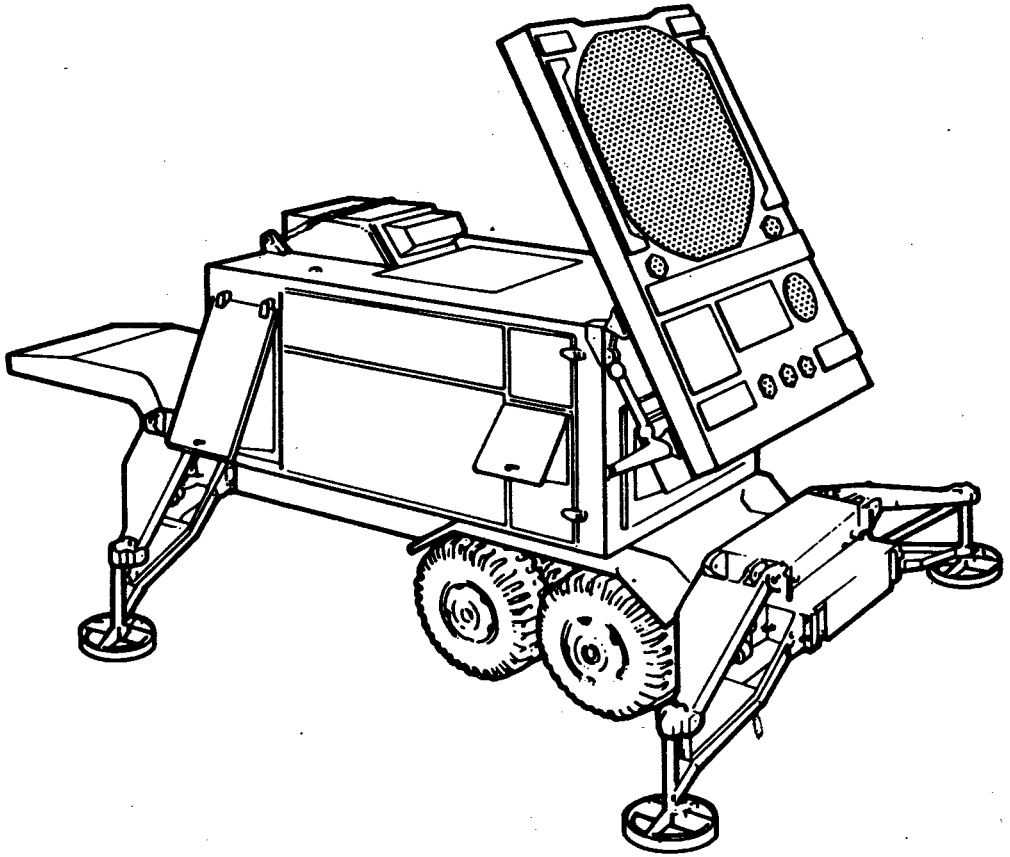
*This project was just funded and does not require a status report for this period.

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 7T 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT FIVE HANDBOOKS ARE EITHER NEAR COMPLETION OR ARE BEING WORKED ON. NO COMPLETION DATE FOR 706-199 DUE TO DELAYS.	383.0	383.0		JUN 78	DEC 84
D 78 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT 706-103 AND 298 PUBLISHED. 8 OTHER HANDBOOKS IN DIFFERENT STAGES OF FINAL DRAFT. DELAY ON 706-203 DUE TO DIFFICULTY IN FINDING A SUBCONTRACTOR WHO MEETS REQUIREMENTS. WORK DELAYED ON 706-475 DUE TO HIGHER PRIORITY GIVEN 706-199.	870.0	743.0	127.0	NOV 79	JUL 85
D 79 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT 706-100 AND 103 PUBLISHED. TWELVE OTHER HANDBOOKS ARE IN VARIOUS STAGES OF FINAL DRAFTING PROCESS. REVISION TO 706-100 PUBLISHED AS MIL HANDBOOK 727.	495.0	387.8	107.2	MAY 83	JUL 85
D 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480 PRELIMINARY FINAL DRAFT MANUSCRIPT CONTINUES. WORK ON 706-177 FINAL DRAFT MANUSCRIPT CONTINUING AT ARDC. DELAYS EXPERIENCED IN GETTING TWG TO FINALIZE OUTLINE FOR 706-123 706-210 AND 706-XXX.	460.0	432.0	28.0	JAN 83	JAN 86
D 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED W/PRIOR YEAR FUNDS. DELAY EXPERIENCED IN GETTING TWG TO FINALIZE REVISED OUTLINE FOR 706-245.	531.0	392.0	39.0	JAN 84	JAN 86
D 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. PRELIMINARY FINAL DRAFT MANUSCRIPT COMPLETED ON 706-122. PROBLEMS EXPERIENCED IN GETTING TWG FOR 706-410.	580.0	472.0	35.0	SEP 83	SEP 85
D 83 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT PRELIMINARY FINAL DRAFT MANUSCRIPT COMPLETED ON 706-122. REMAINDER OF FUNDS ON FY83 EFFORTS EXPENDED ON 706-430 AND TO COVER 6 MO OPERATION OF RTI'S HANDBOOK OFFICE.	120.0	120.0		DEC 83	JAN 85
D 84 5052	ARMY ENGINEERING DESIGN HANDBOOKS TECHNICAL WORKING GROUP (TWG) ESTABLISHED FOR 706-482. DELAY IN ESTABLISHING TWG FOR 706-249. WORK CONTINUED ON 8 OTHER HANDBOOKS BEING PARTIALLY FUNDED WITH FY84 FUNDS.	500.0	404.0	1.3	MAR 85	MAR 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
G 84 0002	MMT CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING PROCUREMENT PACKAGE COMPLETED, DRAWINGS UPDATED + LAYOUT FINALIZED. DELAY IN COMPLETE SPEC PACKAGE DUE TO SITE AND FUNDING PROBLEMS. BY DEC 1984 NEW SITE LOCATION WILL BE COMPLETE AND $250K ADDITIONAL FUNDS MADE AVAILABLE. RFP SENT OUT 7/84.	370.0			OCT 86	OCT 86
G 82 2002	LONG RANGE DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE REQUEST FOR PROPOSALS WAS SUBMITTED DURING MARCH 1984. ELEVEN PROPOSALS WERE RECEIVED AND ARE BEING EVALUATED.	100.0		95.0	JUN 84	SEP 84
G 81 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION SEE STATUS FOR G824005.	421.0	406.0		SEP 81	NOV 84
G 82 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION THE EQUIPMENT IS BEING INSTALLED. THE ACCEPTANCE TEST IS EXPECTED WITHIN THE NEXT 30-60 DAYS.	74.0		6.5	AUG 84	NOV 84
G 82 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK A CONTRACT WAS AWARDED TO GE CO. IN JANUARY 1984 TO DESIGN AND FABRICATE A PROTOTYPE SYSTEM. FINAL DESIGN HAS BEEN REVIEWED AND ACCEPTED. THE PROJECT IS PROGRESSING ON TIME.	299.0	270.0	28.6	SEP 83	JAN 85
G 82 4005	WATER JET MATERIAL REMOVAL SYSTEM PHASE II THE SYSTEM HAS BEEN ACCEPTED AFTER COMPLETING AN 8-HR FINAL TEST. THE SYSTEM HAS PROVEN TO BE UNRELIABLE, THEREFORE, REQUIRES EXCESSIVE MAINTENANCE. THE WATER JET SYSTEM HAS PROVEN EFFECTIVE FOR REMOVING RUBBER FROM TRACK COMPONENT AND ROADWHEELS.	200.0	184.3	15.7	DEC 83	SEP 84
G 82 8001	ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM THIS PROJECT IS CANCELLED AND FUNDS WERE RETURNED TO TACOM.	100.0			SEP 83	JUN 84



ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND
(ERADCOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
H 83 3010		HYBRID MODULATOR FOR PULSED IMPATT MILLIMETER WAVE SOURCES	362
H 84 3010		MILLIMETER-WAVE SOURCES FOR 60 AND 94 GHZ	209
H 83 5107		MMT EHF SOLID STATE AMPLIFIER	205
H 84 5107		MMT EHF SOLID STATE AMPLIFIER	567
H 84 5111		VAPOR GROWTH FOR THIRD GENERATION PHOTOCATHODE	574
H 81 5178		PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR	681
H 82 5183		PRODUCTION OF LARGE DIAMETER SILICON FOR LASER SEEKERS	512
H 84 7000		LASER POLARIZERS	250
2 76 9738		EPITAXIAL + METALLIZATION PROCESSES FOR GAAS IMPATT DIODES	250
H 78 9738		PULSED GALLIUM ARSENIDE IMPATT DIODES	500
H 78 9860		PDN TECHQE-GALLIUM ARSENIDE MIWAV FIELD EFFECT TRANSISTORS	469

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 82 3011	INDIUM-PHOSPHIDE GUNN DEVICES VARIAN AUTOMATED THE CONTROL OF MULTI-LAYER EPITAXIAL GROWTH OF INDIUM PHOSPHIDE FOGUNN DIODES. THEY MADE 56 GHZ DIODES AT 1/3 WATT + 10 PCT EFFICIENCY. 94 GHZ DIODES HAVE ONLY 1/20 WATT POWER OUTPUT. VARIAN IS WORKING FREE TO RAISE POWER + YIELD.	1,227.1	1,118.1	97.8	AUG 84	NOV 84
H 80 3023	TUBULAR PLASMA PANEL NORDEN DELIVERED SAMPLE PANELS AND AN EXERCISER TO DRIVE THEM. THEY ALSO DELIVERED A MIFASS DISPLAY DEMONSTRATION UNIT. A DRAFT OF THE FINAL REPORT FOR THIS PROJECT HAS BEEN REVIEWED, EDITED AND RETURNED FOR PRINTING.	800.0	674.0	95.0	APR 82	OCT 84
H 80 3026	HIGH PRESSURE OXIDE IC PROCESS HORIZONTAL FURNACE WAS UNABLE TO ACHIEVE DESIRED 1000 C TEMP. CONTRACTOR SUGGESTED NEW WORK ON A VERTICAL FURNACE. NAVAL RESEARCH LABS AND DEFENSE NUCLEAR AGENCY SUGGESTED A NEW HORIZONTAL FURNACE PROGRAM FOR FY85. DIRECTION IS UNDECIDED.	650.1	320.9	329.2	MAY 82	DEC 84
H 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ITT ROANOAK SWITCHED TO VAPOR PHASE EPITAXIAL GROWTH OF PHOTOCATHODES ON FIBER OPTIC FACEPLATES TO GREATLY IMPROVE QUALITY. ALSO WENT TO HORIZONTAL BONDING METHOD TO ATTACH GA-AS/AL-GA-AS SUBSTRATE TO FIBER OPTIC FACEPLATE. PASSED CONFIRMATORY TESTS.	580.0	492.4	87.6	MAR 82	OCT 84
H 82 5010	BONDED GRID ELECTRON GUN VARIAN HAD DELAMINATION PROBLEMS WITH BORON NITRIDE BLANKS RECEIVED FROM SUBCONTRACTORS. BLANK FABRICATION WAS IMPROVED BY REDUCING COATING THICKNESS + ROUGHING SUBSTRATE SURFACE FOR BETTER ADHESION. 1ST ENGINEERING SAMPLES ARE UNDER CONSTRUCTION.	972.5	883.7	88.8	MAR 84	APR 85
H 83 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES ONE S-BAND AND ONE C-BAND CFA TUBE HAVE BEEN BUILT AND TESTED. ALL PERFORMANCE GOALS HAVE BEEN MET EXCEPT S-BAND GAIN AND C-BAND TUBE ARCING. DESIGN MODIFICATIONS ARE IMPROVING PERFORMANCE.	408.0	369.0	24.7	NOV 84	NOV 84
H 81 5041	MILLIMETER WAVE MIXERS AND ARRAYS TEN MIXER UNITS WERE DELIVERED TO ETDL FOR EVALUATION. ALL ARE WITHIN SPECIFICATIONS. THESE WILL BE DISTRIBUTED TO SYSTEM CONTRACTORS. FINAL REPORT AND DELIVERY OF 54GHZ UNITS ARE SCHEDULED FOR THE NEXT PERIOD.	575.9	495.0	80.9	JUL 83	FEB 85
H 82 5109	PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL TRW COMPLETED MASK SETS. CONFIRMATORY SAMPLES ARE BEING BUILT. FIFTY-FIVE SAW DEVICES ARE FABRICATED ON EACH 2 IN BY 2 IN WAFER. WAFER YIELDS WERE INCREASED TO 75 PERCENT FOR SINGLE SAW DEVICE PER CHIP + 50 PERCENT FOR THREE SAW DEVICES PER CHIP.	596.0	500.7	19.0	MAY 85	JUN 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 83 5109	PRECISION LOW-COST SAW DELAY LINES FOR UHF APPLICATIONS PHASE II FOLLOW-ON TO ABOVE. TRW IS ESTABLISHING A PILOT LINE TO VERIFY PRODUCTION TECHNIQUES FOR 403 MZ + 560 MZ SAW DEVICES. SEMIAUTOMATIC CHIP MOUNTING + AUTOMATIC TESTING INCLUDING TEMPERATURE CYCLING WERE DEVISED. UNIT COST WILL BE REDUCED.	408.0	383.0	25.0	JUN 85	JUN 85
H 80 5147	HI RESISTIVITY POLYCRYSTALLINE SILICON HEMLOCK CO PRODUCED DETECTOR-GRADE POLYSILICON IN UP TO 3 IN DIAMETER BOULES FOR HUGHES, AMORPHUS MTLS CO + UNITED ENERGY SYSTEMS. DOW CO HAD PRODUCTION PROBLEMS WITH POLYSILICON. THE MTL IS STARTING MTL FOR HIGH PURITY SINGLE-CRYSTAL SILICON.	430.0	382.0	48.0	SEP 82	SEP 84
H 84 5151	LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MOD DET ARRAYS-PH II SANTA BARBARA RESEARCH + TEXAS INSTRUM ARE GROWING CADMIUM-TELLURIDE BOULES THAT ARE SLICED INTO WAFERS AND LIQUID DOPED WITH MERCURY. IMPROVED PURITY AND STOICHIOMETRY ARE SOUGHT AND CORRELATED WITH ARRAY PERFORMANCE- MASK REDESIGN + AUTO BONDING.	2,498.9	2,325.9	153.0	MAR 85	MAR 85
H 84 5162	EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II REQUEST FOR PROPOSAL (REP) WAS MAILED OUT ON 24 APR 84. CONTRACTOR PRICE PROPOSAL HAS BEEN RECEIVED AND EVALUATED TECHNICALLY AS OF 28 JUN 84. CONTRACT AWARD IS ANTICIPATED TO BE ON SCHEDULE.	135.0		1.0	DEC 84	DEC 84
H 84 5168	AUTOMATIC RETICLE INSPECTION SYSTEM - PHASE II KLA INSTRUMENTS STARTED ON PHASE II OF THIS PROGRAM FOR A DIE-TO-DATA BASE INSPECTION SYSTEM. WILL SPEED UP SIGNAL PROCESSING TURC HANDLE INCREASED DATA RATES AND IMPROVE OPTICAL SYSTEM SOURCE AND SENSOR. WILL BE A DIE-TO-DATA BASE SYSTEM.	600.0	540.0	5.0	NOV 85	NOV 85
H 83 5174	CAM SPUTTERING CONTROL FOR ZNO HARRY DIAMOND LABS IS ESTABLISHING A COMPUTER CONTROLLED MASS SPECTROMETER INSPECTION SYSTEM FOR SEMICONDUCTORS. MASS SPECTROMETER WAS RETURNED TO MANUFACTURER FOR REPAIRS. A VISIT WAS MADE TO REPAIR SITE + INSTRUMENT INSPECTED PRIOR TO SHIPMENT.	150.0		150.0	DEC 84	DEC 84
H 84 5174	AUTO SPUT PROC CONT F/PROD ZINC OXIDE ACOUSTIC DEVICES - CAM FOLLOW-ON TO H 83 5174 ABOVE. HARRY DIAMOND LABS WROTE COMPUTER GRAPHICS PROGRAM TO DISPLAY THE MASS SPECTRUM AND TO PRINT IT FOR RECORD-KEEPING. MASS SPECTROMETER WAS SHIPPED TO SANTA BARBARA RESEARCH CENTER IN SUPPORT OF HGCDTE MMT PROGRAM.	200.0		66.5	DEC 84	DEC 84
H 84 5180	LOW COST DEWAR + INTERCONNECT ASSEMBLY - PHASE II SBRC IS REDESIGNING THE DEWAR TO MEET HEAT LOAD, VACUUM AND MICROPHONICS REQUIREMENTS. DESIGN REVIEW IN AUGUST. HEDD IS REDESIGNING THEIR GLASS AND METAL DEWARS. VACUUM COMPATABILITY OF TAPE CABLE AND CERAMIC FEEDTHRU ARE BEING STUDIED. REVIEW IN OCT	2,144.0	1,429.5	84.0	JUN 85	JUN 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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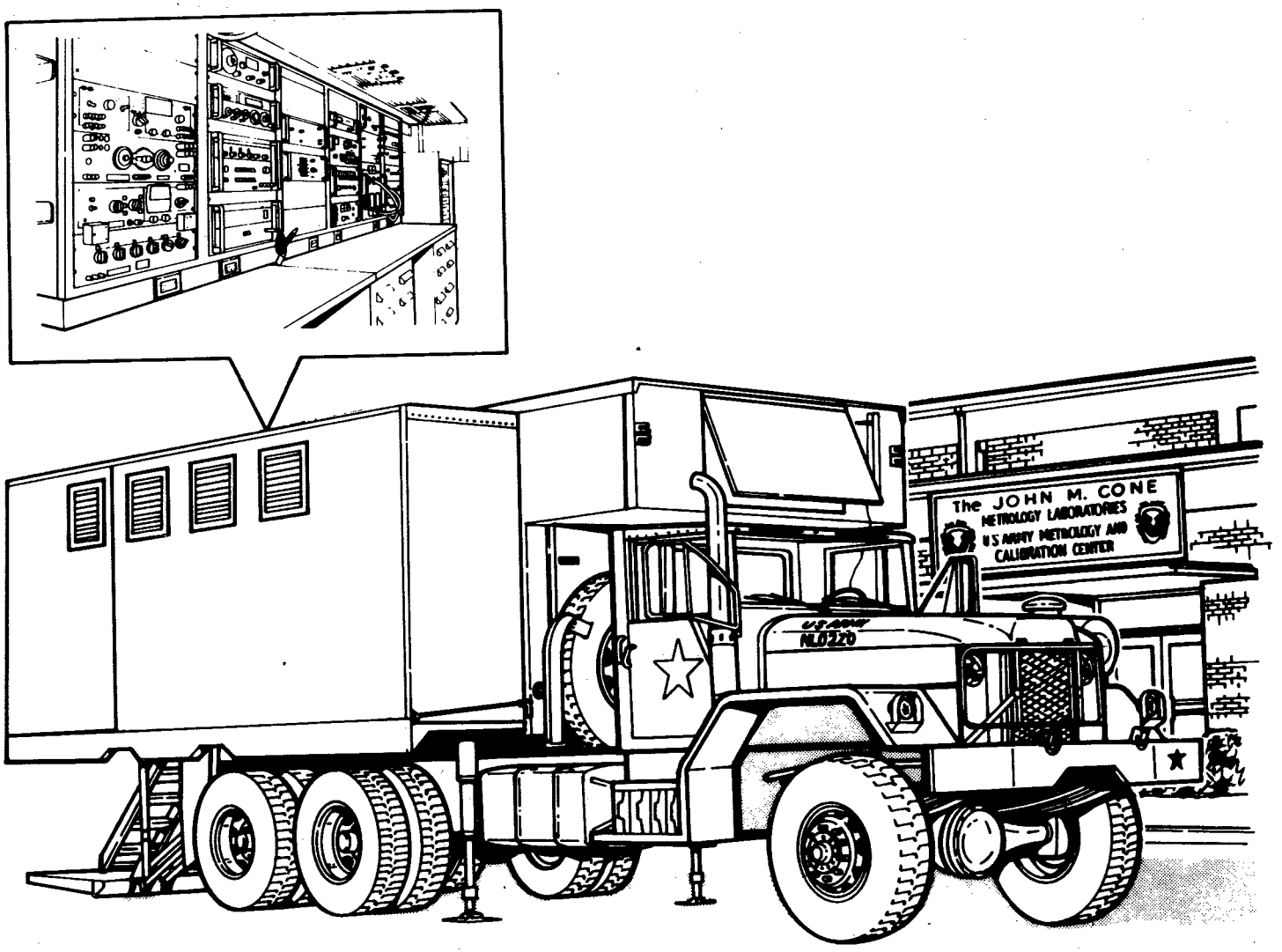
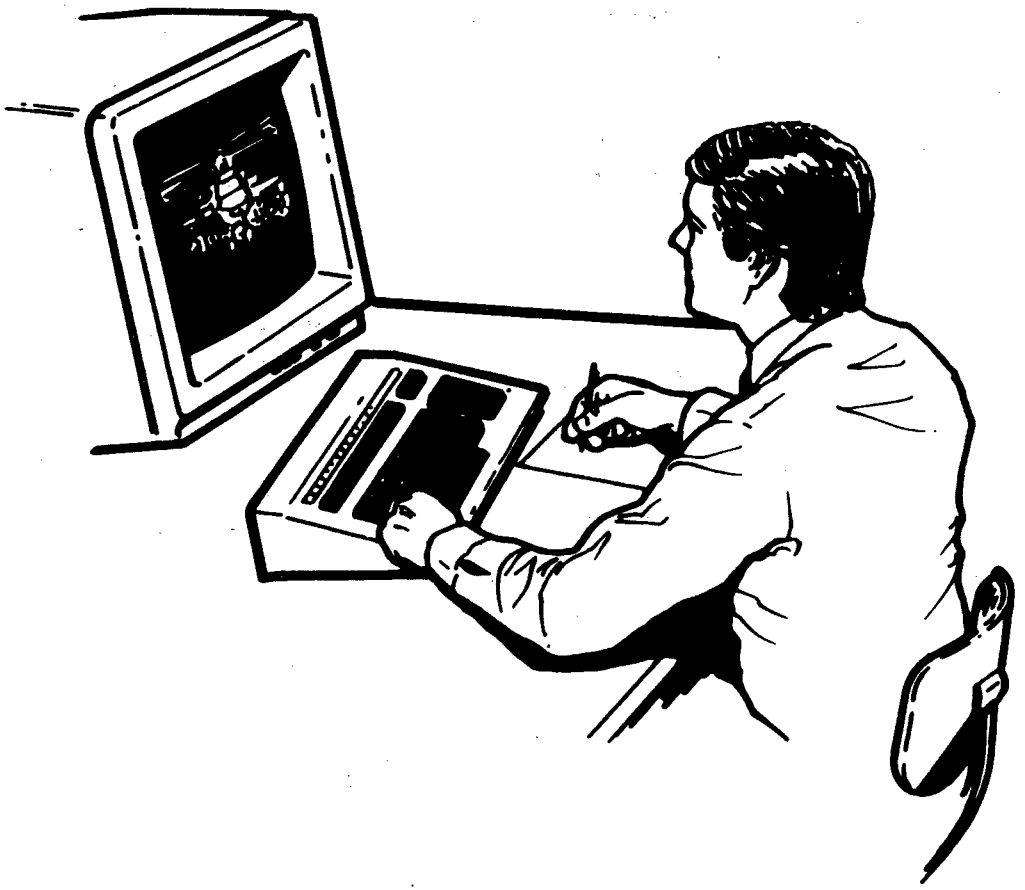
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 82 5193	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS THE CONTRACTOR CONTINUES TO COLLECT EXPOSURE DATA AT FIELD SITES AND CORRELATION BETWEEN TYPES OF CORROSION AND CERTAIN ENVIRONMENTS. DURABILITY OF ELECTRONIC MATERIALS IS BEING CHECKED IN AGING TESTS. AGING TESTS WILL BE AVAILABLE FOR GOVT. USE.	21.0	21.0		JUN 83	DEC 84
H 83 5196	INDUSTRIAL PRODUCTIVITY IMPROVEMENT - ELECTRONICS HARRIS CORP DRAFTED A FINAL REPORT CONTAINING 15 POTENTIAL PROJECTS FOR POSSIBLE FUNDING IN FY85. ONE ON ROBOTIC INSERTION OF CHIP CARRIERS IN DESOLDERABLE SOCKETS ONTO PCBS WAS WRITTEN INTO A P-16. ONE ON COMPUTERIZING FACTORY OPERATIONS LOOKS GOOD.	893.0	893.0		JUN 84	AUG 84
H 84 5196	AUTO METHODS F/MFG + APPLY OF LEADLESS CHIP SOCKETS TO PWB HARRIS CORP WILL IMPROVE MANUFACTURING PROCESSES FOR A SOCKET FOR LEADLESS CHIP CARRIERS, AND DEVELOP AN AUTOMATED PLACEMENT DEVICE. CARRIERS IN SOCKETS WILL BE PLACED ONTO PCB'S, SOLDERED, AND ENVIRONMENTALLY TESTED. WILL DEV. REWORK PROCEDURES.	846.0			MAY 86	MAY 86
H 81 9588	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES LITTON IS PERFORMING 1ST ARTICLE RELIABILITY TEST ON 10 TUBES. THREE FAILURES HAVE OCCURRED TO DATE AGAINST CONTRACTURAL ALLOWANCE OF FIVE. NEARLY ALL FUNDS ARE EXPENDED. REMAINING EFFORT WILL CONCENTRATE ON COMPLETING TEST AND WRITING FINAL REPORT.	1,386.0	1,280.0	106.0	JUN 84	JAN 85
H 79 9807	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT GEND PHASE III FOLLOW-ON TO H 77 9754. A NOISE PROBLEM WAS FOUND IN RECENTLY BUILT QUARTZ CRYSTAL FLATPACKS. POLYIMIDE ADHESIVE USED TO BOND QUARTZ BLANK TO SUPPORT STRUCTURE IS SUSPECT. AF MIPR FOR $430K WILL EXTEND WORK SCOPE TO SC CUT CRYSTALS.	1,272.1	1,214.1	58.0	MAR 81	FEB 85
H 79 9838	MINIATURE CATHODE RAY TUBES SINE WAVE MODULATION PROBLEMS HAVE BEEN SOLVED. CONFIRMATORY SAMPLES HAVE PASSED ENVIRONMENTAL AND ELECTROMAGNETIC COMPATIBILITY TESTS. DATA FROM THESE TESTS IS BEING EVALUATED. SAMPLES ARE CURRENTLY UNDERGOING ACCELERATED LIFE TESTING.	369.2	278.7	90.5	AUG 81	NOV 85
H 82 9905	LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS WESTINGHOUSE DIFFUSED AN 18 GHZ MICROWAVE AMPLIFIER IN GALLIUM ARSENIDE. IT WAS SHORT ON GAIN AND LONG ON NOISE AND WAS RE-CONFIGURED TO IMPROVE ON THESE PARAMETERS. NEW CIRCUITS ARE BEING RUN. THEY WILL BE EASY TO ASSEMBLE AND REQUIRE NO TUNING.	986.7	895.0	15.6	SEP 84	DEC 85
H 81 9909	PRODUCTION TECHNIQUES FOR SILICON MW POWER TRANSISTORS MSC OBSERVED METAL RESTRUCTURING IN LIFE TEST OF 2 SILICON S-BAND 30 WATT TRANSISTORS. CAUSE IS METALIZATION THICKNESS IS HALF OF THAT REQUIRED. SECOND LIFE TEST OF 4 DEVICES HAS PASSED 3700 HRS AND WILL CONTINUE TO CONTRACT CLOSE OUT.	942.9	852.9	90.0	SEP 83	FEB 85



TEST MEASUREMENT DIAGNOSTIC EQUIPMENT SUPPORT GROUP (TMDE)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
3 80 3115		ENGINEERING FOR METROLOGY AND CALIBRATION	747
	17	DYNAMIC ELECTRICAL MEASUREMENTS AND STANDARDS	
3 82 3115		ENGINEERING FOR METROLOGY AND CALIBRATION	450
	01	JOSEPHSON EFFECT VOLTAGE STANDARD	
	17	DYNAMIC ELECTRICAL MEASUREMENT STANDARDS	
	25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS	
	34	IMPROVED ON-SITE SERVICE	
	35	VISCOSITY AND DENSITY MEASUREMENTS	
	36	DIRECT FLOWMETER READOUT	
	37	DATA ANALYSIS TECHNIQUES	
3 83 3115		ENGINEERING FOR METROLOGY AND CALIBRATION	240
	01	JOSEPHSON EFFECT VOLTAGE STANDARD	
	25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS	
	34	IMPROVED ON-SITE SERVICE	
	35	VISCOSITY AND DENSITY MEASUREMENTS	
	36	DIRECT FLOWMETER READOUT	
3 84 3115		ENGINEERING FOR METROLOGY AND CALIBRATION	700



ARMY MATERIALS AND MECHANICS RESEARCH CENTER (AMMRC)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
M 78 6350	2434	RAPID NDT FOR DOPANT DENSITY AND DISTRIBUTION	
M 79 6350	2425	OPTICAL TESTING OF FAR INFRARED MATERIALS	
M 80 6350	2014	PORTABLE NEUTRON RADIOGRAPHY SYS - ENGR MODEL	
	2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH.	
M 81 6350	2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION	
	2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM	
	2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION	
	2800	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR	
	2803	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAMIC TURB	
	2817	FIBER OPTIC CABLE ASSEMBLIES TEST CRITERIA DEVELOPMENT	
	2858	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS	
M 82 6350	2245	CERAMIC MATL NDT EVALUATION TECHNIQUES	
	2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION	
	2841	STANDARDIZATION OF FRACTURE TOUGHNESS TESTS	
	2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT	
	2882	NUCLEAR MAG RESONANCE TEST FOR DETM MOISTURE IN COMPOSITES	
	2883	AUTO REFORMATTING OF ATE LANG FOR TESTING SEMICONDUCTORS	
	2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS	
	2894	RESIDUAL STRESS DETERMINATION SY ACOUSTIC WAVE VELOCITY	
	2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET	
M 83 6350	2642	ADVAN PENETRATING RADIATION TECH FOR PRODUCT EVALUATION	
	2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT	
	2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS	
	2894	RESIUDAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY	
	2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY	
	2947	MOBILITY MONITORING SYSTEM	
	2962	AUTOMATION OF 65 DEGREE-C PROPELLANT SURVEILLANCE TEST	
	2968	INVEST OF SCAN PHOTOACOUSTIC MICROSCOPY F/CERAMICS INSPECT	
	2981	FLUIDIC POWER SUPPLY ACCEPTANCE TESTER	
M 84 6350	2844	MEASURE PROJECTILE RESISTANCE TO FREE FALL IMPACT	
	2887	SIMULANT PERMEATION TESTING OF PROTECTIVE MATLS	
	2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS	
	2891	HGCDTE MATERIAL SCREENING TEST	
	2929	EVAL OF CHROMIUM ADHESION IN LARGE CALIBER GUNS	
	2947	MOBILITY MONITORING SYSTEM	
	2962	AUTOMATION OF THE 65 DEGREES C SURVEILLANCE TEST	
	2968	SCANNING PHOTOACOUSTIC MICROSCOPY OF CERAMICS	
	2974	SELECTIVE DETECTION OF DOUBLE-BASE STABILIZERS + DECOMP PRO	
	2989	DEPOT INSP OF TRANSMISSION VALVE BODY	
	3021	MECH ACCEPT TEST METHODS FOR PENETRATOR COMP AND MATERIALS	
	3093	MAGNETIC FLUX LEAKAGE INSPECTION OF THE 60MM M720 MORTAR	
	3094	SOFTWARE TEST DRIVERS	

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

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M 80 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,323.3	1,633.7	2,689.6	APR 83	OCT 84
M 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM FUNDS WERE RECEIVED TO CONTINUE THE WORK ON THE PROJECT. THE CLOSED CIRCUIT TV HAS BEEN INTERFACED WITH AN ARMY M2 BORESCOPE. IT IS BEING USED TO RECORD WHITE LIGHT INSPECTION OF M68 AND XM256 GUN TUBES.	41.2		20.0	JUN 83	SEP 84
M 80 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT THIS PROJECT WAS INITIATED TO ESTABLISH A SELF CONTAINED TEST SYSTEM FOR EVALUATING THE ADHESION OF PROTECTIVE COATING ON GUN STEEL. THE SYSTEM ESTABLISHED DID NOT MEET THE PROJECT REQ. THE PROJECT WILL BE COMPLETED USING R+D FUNDS.	60.0				APR 84
M 80 6350 2646	PISTON ACTUATOR TEST THE TECHNICAL WORK FOR THE ESTABLISHMENT OF PISTON ACTUATOR TESTER HAS BEEN COMPLETED. THE RESULTS OF THIS PROJECT WILL BE IMPLEMENTED BY AN ENGINEERING CHANGE PROPOSAL. IT IS ANTICIPATED,ONCE IMPLEMENTED, THAT THIS PROJ WILL SAVE $10-11K PER YEAR.	85.0				MAY 84
M 81 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,349.0	1,479.5	2,869.5	OCT 83	OCT 84
M 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT ALL MAJOR COMPONENTS OF THIS SYSTEM HAVE BEEN RECEIVED AND MEET SYSTEM REQUIREMENTS. THE FABRICATION AND TESTING OF COMPUTER INTERFACES AND THEIR INTEGRATION INTO THE MEASUREMENT SYSTEM IS NEAR COMPLETION.	65.0		65.0		SEP 84
M 81 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE REPAIR OF THE MAGNETIC RECORDING BORESCOPE HAS BEEN COMPLETED. THE MRB IS OPERATIONAL AND IS BEING USED TO INSPECT THE INTERIOR CONDITION OF GUN TUBES.	362.0				SEP 85
M 81 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM NBS SUBMITTED A FINAL TECHNICAL REPORT. THIS EFFORT ESTABLISHED A NONSUBJECTIVE CALIBRATION SYSTEM FOR OPTICAL SCRATCH AND DIG STANDARDS. MIL SPEC MIL-O-13830 AND US GOV DRAWING WILL BE REVISED TO REFLECT THE CHANGED CALIBRATION METHOD.	252.0				AUG 84
M 81 6350 2639	ROADWHEEL SEAL TEST MACHINE THE IN-HOUSE FAB OF THE ROADWHEEL SEAL TEST MACHINE IS IN PROCESS. PROLONGED DELAYS IN RECEIPT OF PURCHASED ITEMS HAS RESULTED IN A 1 YEAR EXTENTION OF THE PROJECT. A HIGHER PRIORITY HAS BEEN PLACED ON THIS EFFORT TO ASSURE ACCEPTABLE PROGRESS.	135.0				JUN 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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M 81 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST ALL MANUFACTURED COMPONENTS HAVE BEEN ORDERED AND FABRICATION HAS COMMENCED. THE PROJECT HAS BEEN DELAYED DUE TO LATE DELIVERIES OF VALVE PARTS. THE CONTRACTOR IS ASSESSING THE PROGRAM SCHEDULE IMPACT CAUSED BY THESE DELAYS.	306.0				SEP 84
M 81 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION PRELIMINARY ACCEPTANCE TESTING AT THE CONTRACTORS PLANT WAS INITIATED AND IS CURRENTLY ON-GOING. UPON COMPLETION OF THESE TESTS, THE SYSTEM WILL BE DELIVERED TO NORRIS INDUSTRIES FOR INSTALLATION.	224.0	197.0	27.0		MAR 85
M 81 6350 2815	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT THE CONCEPTUAL DESIGN HAS BEEN COMPLETED. THE SELECTION AND PURCHASE REQUESTS FOR MAJOR ELECTRONIC COMPONENTS HAVE BEEN COMPLETED. DESIGN OF THE INTERFACE BETWEEN THE CHROME PLATE THICKNESS MEASURING HEAD AND THE GUN TUBE INSPECTION IS PROGRESSING.	69.6			OCT 82	SEP 84
M 81 6350 2829	DETECTOR DEWAR MICROPHILS PROD TEST SET + PROCEDURES THE TECHNICAL WORK HAS BEEN COMPLETED. THIS PROJECT RESULTED IN THE ESTABLISHMENT OF MICROPHONICS TEST STATION WHICH HAS BEEN PUT INTO OPERATION ON HONEYWELL COMMON MODULE DETECTOR/DEWAR PRODUCTION LINE IN FEB 84 WITH IPF EXPANSION CONTRACT FUNDS.	210.0				MAY 84
M 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES THE PROTOTYPE CANISTER INSPECTION DEVICE DEMONSTRATED THE CAPABILITY TO ACCOMODATE THREE TYPES OF CANISTERS. IT ALSO HAS THE CAPABILITY TO INSPECT M11 EMPTY SHELL. A COMPREHENSIVE TEST PLAN HAS BEEN PREPARED. THE TECHNICAL REPORT IS BEING PREPARED.	85.0	55.0	30.0	DEC 82	JUL 84
M 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) ADDITIONAL FUNDING, $20K WAS ALLOCATED TO FINALIZE THE PROTOTYPE MOBILITY MONITORING SYSTEM AT APG. A LETTER, DETAILING SOME FINE TUNING POINTS OF THE DESIGN FOR TACOM'S NEED WAS TRANSMITTED TO APG FOR CONCURRENCE.	215.0			DEC 84	DEC 85
M 81 6350 2977	IMAGE INTENSIFIER SYSTEM VEILING GLARE TESTER THE CONTRACTOR RECEIVED ALL THE PARTS AND SYSTEM FABRICATION IS UNDERWAY. SYSTEM DELIVERY IS EXPECTED AHEAD OF SCHEDULE, CERTAINLY BY AUGUST 1984 OR POSSIBLE BY JULY 1984.	83.4			SEP 84	NOV 84
M 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,573.0	1,920.0	2,653.0	OCT 84	OCT 84

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M 82 6350 2235	ACOUSTIC EMISSION WELD MONITOR THE WELD MONITOR HAS BEEN RETURNED TO THE CONTRACTOR TO RECEIVE ADDITIONAL MEMORY AND FLAW DETECTION ENHANCEMENTS. THIS WILL PROVIDE A MEANS TO OPTIMIZE THE FLAW DETECTION FOR FUTURE APPLICATIONS. THE M1 PM IS PROVIDING THE FUNDING FOR THIS MOD.	185.0				DEC 84
M 82 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS SEE PROJECT M 83 6350-2448 FOR STATUS.	127.2			JUN 83	JUL 84
M 82 6350 2640	TRACK TEST MACHINE THE TWO, TWO-STAGE SWITCHES HAVE BEEN INSTALLED. ALIGNMENT OF THE FOUR HYDRAULIC CYLINDERS HAS BEEN COMPLETED. ELECTRICAL WIRING DRAWING HAS BEEN COMPLETED. ALL OF THE DRAWINGS HAVE BEEN COMPLETED.	296.0				DEC 84
M 82 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION THE CONTRACT TO PERFORM APPLICATIONS TEST WAS AWARDED TO NORRIS INDUSTRIES. THESE TEST WILL COMMENCE UPON INSTALLATION OF THE SYSTEM SCHEDULED FOR JUNE 1984.	125.0	65.0		FEB 84	MAR 85
M 82 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION A NEW OPERATING SYSTEM RDOS 7.2 WAS INSTALLED. A CHARGED-COUPLED DEVICE AND FOCAL PLANE ARRAY WERE TESTED. BOTH TEST WERE SUCCESSFUL DEMONSTRATING THE FUNCTIONALITY OF THE HARDWARE/SOFTWARE INTEGRATED INTO THE TESTER.	200.0				APR 84
M 82 6350 2826	LIQ CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS THE PROCEDURE HAS BEEN MODIFIED TO ALLOW MORE EFFECTIVE USE OF THE COMPUTER. ALL THE DATA HAS BEEN OBTAINED AND IS CURRENTLY BEING EVALUATED. A PAPER DESCRIBING THE PROCEDURE HAS BEEN ACCEPTED FOR PRESENTATION TO JANNAF PROPELLANT CHAR SUBCOMMITTEE.	80.0				JUL 84
M 82 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING SEE PROJECT NO M 84 6350-2876 FOR STATUS.					SEP 84
M 82 6350 2878	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT THE TECHNICAL DATA PACKAGE WAS COMPLETED. THE NECESSARY PAPERWORK TO MODIFY AN EXISTING CONTRACT TO PURCHASE A NEW STRAIGHTENING PRESSES IS BEING PREPARED TO INCORPORATE THE NEW TECHNICAL DATA PACKAGE REQUIREMENTS.	63.0		58.8	JUN 86	APR 85
M 82 6350 2887	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING TESTING OF PROTECTIVE MATERIALS IS CONTINUING. RESULTS TO DATE FAVOR HEXADIENYL ACETATE AS THE OPTIMUM SIMULANT. HEXADIENYL ACETATE APPEARS TO REPRODUCE VERY CLOSELY THE LAG TIME FOR PERMEATION OF GB THROUGH BUTYL CLOTH.	122.0			JUN 83	SEP 84

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M 82 6350 2891	HG CD TE MATERIAL SCREENING TEST THE CONTRACTOR HAS MADE CONSIDERABLE PROGRESS IN IMPROVING THE EX L REFLECTIVE OPTICS HAVE BEEN INSTALLED, AND A NEW DEWAR SYSTEM WITH AN IMPROVED SAMPLE HOLDER HAS BEEN IMPROVED.	175.0		13.4	DEC 84	JAN 86
M 82 6350 2892	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL A PROTOTYPE ANALOG CHANNEL FOR INTERFACE WITH THE PHASE II SYSTEM HAS BEEN DESIGNED AND TESTED. THE DRIVE CAPABILITY INCLUDES A 20 FT. MINICOAX CAPABILITY IN ADDITION TO THE ARRAY ELEMENT. A SOFTWARE PACKAGE HAS BEEN CREATED FOR HOLOGRAPHIC IMAGING.	85.0			DEC 83	DEC 84
M 82 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY THE FINAL VERSION OF THE TESTABILITY ALTERNATIVES ANALYSIS WAS COMPLETED AND PUBLISHED. COMPLETED OUTLINE OF APPROACH FOR THE DEMONSTRATION OF UTILITY OF APPROACH.	355.0			DEC 85	SEP 84
M 82 6350 2901	LASER AIMING DEVICE THE ORDER FOR THE ACQUISITION OF A HP-85B MICRO-COMPUTER SYSTEM WAS PLACED. THE FINAL DESIGN WAS REVIEWED AND APPROVED. ALL OF THE PURCHASED COMPONENTS HAVE BEEN RECEIVED. THE FABRICATION OF THE SYSTEM HAS COMMENCED.	154.2	119.2		AUG 84	FEB 85
M 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION THE MODULAR DESIGN DEFINITION HAS BEEN COMPLETED AND IS BEING EVALUATED. THE HOST COMPUTER HAS BEEN PROCURED. SOFTWARE DEVELOPMENT INCLUDES THE OPERATING SYSTEM AND APPLICATION PROGRAMS WHICH WILL EVENTUALLY BE USED IN THE TARGET SYSTEM.	200.0			JUL 85	SEP 84
M 82 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP THE CONTRACT AWARD IS BEING DELAYED DUE TO PROCUREMENT WORKLOAD. THE CONTRACT AWARD IS CURRENTLY SCHEDULED FOR AUGUST 1984.	120.0			NOV 83	MAY 85
M 82 6350 2938	EDDY CURRENT CRACK INSPEC PROCEDURE F/BORE EVACUATOR HOLES THE FINAL EVALUATION OF THE INSPECTION METHOD HAS BEEN COMPLETED. FABRICATION OF THE BORE EVACUATOR HOLE TEST SPECIMENS HAVE BEEN COMPLETED. THE SINGLE FREQ. METHOD SHOWS THE PRESENCE OF SLOTS OR CRACKS.	54.0			MAR 83	JUL 84
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R B THE CONTRACTOR HAS QUALIFIED THE RADIATION RESPONSE TEST PROCEDURE FOR CERAMIC FLATPACK AND KOVAR ENCLOSED RESONATORS. THE REFLECTOMETER WHICH WILL ENABLE FREQ. MEASUREMENTS TO BE MADE INDEPENDENT OF CABLE LENGTH AND VARIATIONS HAS BEEN INSTRUMENTED.	77.0			JUN 83	DEC 84
M 82 6350 3024	STANDARD SOFTWARE REQUIREMENTS ENGINEERING LANGUAGE A CONTRACTOR PROPOSAL HAS BEEN ACCEPTED AND RECOMMENDED FOR AWARD. THIS TASK INCLUDES MOD AND INSTALLATION OF IORL/CARDS SOFTWARE TO BE COMPATIBLE WITH THE UNIX V OPERATING SYSTEM ON THE VAX COMPUTER NOW BEING INSTALLED AT PAD, ARDC.	65.0		11.0	OCT 85	OCT 85

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M 83 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	2,150.0	656.6	1,446.0	OCT 84	OCT 84
M 83 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS AT THE END OF THE CONTRACTUAL EFFORT SEVERAL AREAS OF INVESTIGATION STILL NEEDED REFINEMENT. A CONTRACT MODIFICATION AND EXTENSION WAS AWARDED TO COMPLETE THE INVESTIGATION. THE CONTRACTOR HAS SUBMITTED LEVEL 1 DRAWINGS FOR THE PROPOSED LIFE TESTER.	15.0				JUL 84
M 83 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION THE VALIDATION PHASE OF THIS PROJECT HAS BEEN COMPLETED. THIS CONSISTED OF DAILY USE OF SOP. A DRAFT OF THE FINAL REPORT HAS BEEN REVIEWED AND RETURNED TO THE CONTRACTOR FOR REVISION. ALSO, THE FATIGUE TESTING OF TRACK PINS HAS BEEN COMPLETED.	50.0		36.6	APR 84	SEP 84
M 83 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTOPILOT TESTING SEE PROJECT NO M 84 6350-2876 FOR STATUS.					SEP 84
M 83 6350 2888	IN-PROCESS DETM OF LOWERED DETECTION LIMIT OF PHOTOMETRICS THE TECHNICAL WORK FOR THE ESTABLISHMENT OF IN-PROCESS DETECTION LIMITS OF PHOTOMETRIC DETECTORS HAS BEEN COMPLETED. THE RESULTS OF THIS PROJECT ARE BEING INCORPORATED INTO AGENT CHALLENGE TESTING PROGRAMS FOR GAS FILTERS AND IMPERMEABLE MATERIALS.	32.0			MAY 84	JUN 84
M 83 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES SEE PROJECT M 84 6350-2896 FOR STATUS.				SEP 83	SEP 85
M 83 6350 2914	DEV OF AN AUTO ANAL AND CONTROL SYSTEM FOR GAS LIFE TESTERS DATA ACQUISITION AND CONTROL INSTRUMENTATION FROM SEVERAL SOURCES HAVE BEEN EVALUATED. PURCHASE REQUESTS FOR HARDWARE WERE PROCESSED AND EQUIPMENT HAS BEEN DELIVERED. FUTURE WORK WILL BE ACCOMPLISHED WITH FY84 FUNDS.	11.0			MAY 84	SEP 84
M 83 6350 2972	CAPILLARY GAS CHROMATOGRAPHIC TEST OF ARMY SOLID PROPELLANTS SEE PROJECT NO M 84 6350-2972 FOR STATUS.				SEP 83	FEB 85
M 83 6350 2980	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS SEE PROJECT M 84 6350-2980 FOR STATUS.	100.0			DEC 83	APR 85
M 83 6350 3001	NEW ACCEPTANCE TESTS F/CHEM AGENT RESIST OF URETHANE PAINTS THE TECHNICAL WORK FOR CHEMICAL AGENT RESISTANT URETHANE PAINTS HAS BEEN COMPLETED. METHODOLOGY IS BEING DEVELOPED TO INCORPORATE THE RESULTS OF THIS PROJECT IN MIL-C-46168(MR).	71.0			APR 84	JUN 84

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M 83 6350 3006	ACOUSTIC EMISSION MONITOR/CONTR OF GUN TUBE STRAIGHTENING DESIGNED AN INTEGRATED AE COUPLING DEVICE FOR THE TUBE STRAIGHTENING PRESSES. FINISHED TESTING FOR THE DEVELOPMENT OF THE PROTOTYPE SYSTEM. DESIGNED AND DEVELOPED A PROTOTYPE SYSTEM.	50.0		50.0	SEP 83	JAN 84
M 83 6350 3011	PASSIVE/ACTIVE ROD TESTING THE PARTS INSTRUMENTATION HAS BEEN COMPLETED. THE FACILITY HAS BEEN USED TO TEST NOT ONLY ND-YAG LASER RODS, BUT ALSO RODS OF OTHER COMPOSITIONS THAT DO NOT VARY GREATLY FROM ND-YAG.	520.0			SEP 85	SEP 84
M 84 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,162.0	1,662.2	785.0	OCT 85	OCT 85
M 84 6350 2225	TRI-AXIAL VIBRATION TEST PROC S FOR MISSILE + ARTILLERY FUZ SINCE THE FY84 FUNDS WERE DELAYED 6 MONTHS, NO PROGRESS WAS MADE ON THE PROJECT. ALSO, A PORTION OF THE FY84 FUNDS HAVE BEEN REPROGRAMMED DUE TO THE 6 MONTH FUNDING DELAY. THE COMPLETION DATE HAS BEEN RESCHEDULED FROM FEB 85 TO MAR 85.	90.0			MAR 85	MAR 85
M 84 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE A SET OF OPTIMAL PARAMETERS FOR THE TGA OF ASC WHETLERITES HAVE BEEN DETERMINED. USING THESE PARAMETERS IT IS POSSIBLE TO ACCURATELY DETERMINE BET SURFACE AREA FROM A SINGLE CONCENTRATION OF ADSORBATE USING THE TGA.	33.0			FEB 85	FEB 85
M 84 6350 2642	ADV PENETRATING RADIATION TECH FOR PRODUCT EVALUATION THE NTIAC DATA BASE HAS BEEN OBTAINED AND SCANNED. IT WAS NOTED THAT TETRABROMOETHANE + DIIODOBUTANE ARE USED TO ENHANCE MATERIALS. HOWEVER, THERE ARE A NUMBER OF POTENTIAL HAZARDS IN USING THEM. ZINC IODIDE APPEARS TO BE SAFEST AND MOST EFFECTIVE.	160.0		84.2	SEP 84	SEP 84
M 84 6350 2834	IMPROVED INSPECTION OF TORSION BAR SHOT PEENING SEE PROJECT M 83 6350-2834 FOR STATUS.	50.0			SEP 84	SEP 84
M 84 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING THE INTEGRATION OF THE HARDWARE-IN-THE-LOOP(HWIL) WITH THE AD-10 SIMULATOR CONTINUED FOR THE IR TEST FACILITY. THE AD-10 CONTROL OF THE SEEKER PLATFORM WAS SUCCESSFULLY COMPLETED INITIAL EFFORTS IN THE INTERFACE SOFTWARE COMMENCED.	460.0			SEP 84	SEP 84
M 84 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY RESULTS OF THE LITERATURE SURVEY INDICATED THAT IT IS APPROPRIATE AND NECESSARY TO UTILIZE AN APPROACH TO THE ACOUSTOELASTIC MEASUREMENT OF STRESS WHICH ACCOUNTS FOR THE EFFECT OF TEXTURE DUE TO MANUFACTURING PROCESSES.	40.7			DEC 84	DEC 84

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M 84 6350 2895	NDT OF ADVANCED COMPOSITES FOR BRIDGING PROCUREMENT EFFORTS HAVE BEEN INITIATED FOR INSTRUMENTATION REQUIRED TO ASSEMBLE A PROTOTYPE CONTACT ULTRASONIC C-SCAN SYSTEM FOR CERTIFICATION AND IN-SERVICE INSPECTION OF COMPOSITE STRUCTURES FOR ARMY BRIDGING.	41.5			MAR 85	MAR 85
M 84 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES THE CONTRACTOR DELIVERED THE FINAL FUNCTIONAL DESCRIPTION SPECIFICATIONS. WORK WAS STOPPED IN JAN 84 AS SIMILIAR WORK WAS BEING PERFORMED BY ELECTRONIC PROVING GROUND'S SUPPORT CONTRACTOR. AS A RESULT EPG WILL PROVIDE THE BASIC TEST ITEM SIMULATOR.	466.0			SEP 85	SEP 85
M 84 6350 2914	AUTO ANALYTICAL + CONTROL SYSTEM FOR GAS LIFE TESTER TEST PLAN AND PROJECT OBJECTIVES HAVE BEEN REVIEWED BY THE SOFTWARE SUPPORT SYSTEMS ENGINEERS. SOFTWARE DEVELOPMENT HAS COMMENCED.	77.5			FEB 85	FEB 85
M 84 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION THERE WAS NOT ANY WORK PERFORMED ON THIS PROJECT DURING THE LAST REPORTING PERIOD. THE PHASE II OPTION OF THE CONTRACT IS IN THE PROCESS OF BEING AWARDED. THIS IS SCHEDULED TO BE FINALIZED IN JULY 1984.	350.0			JUL 86	JUL 86
M 84 6350 2926	TESTING OF M55 DETONATOR STAB SENSITIVITY AND OUTPUT SYSTEM DESIGN HAS BEEN COMPLETED AND REQUIRED COMPONENTS HAVE BEEN ORDERED AND DELIVERED. FABRICATION, INITIATED IN FY83, IS CONTINUING AND PROGRAMMING OF THE MINI-COMPUTER HAS BEEN STARTED.	105.0			FEB 85	FEB 85
M 84 6350 2928	IN-PROCESS THREAD FORM INSPECTION A CONCEPT HAS BEEN ESTABLISHED AND A PROPOSED LAYOUT OF THE INSTALLATION PREPARED. UPON APPROVAL FROM THE MANUFACTURING DIVISION, PROCUREMENT OF THE PURCHASED ITEMS WILL BE INITIATED.	135.0			APR 86	APR 86
M 84 6350 2930	IDENTATION TEST FOR YIELD STRENGTH MEASUREMENT THE FUNDING FOR THIS PROJECT WAS RECEIVED IN APRIL 84. DUE TO THE LATE FUNDING, LITTLE PROGRESS HAS BEEN MADE ON THIS PROJECT TO DATE.	50.0			MAY 85	MAY 85
M 84 6350 2933	STABLE LIGHT SOURCE FOR LOW LEVEL PHOTOMETRIC MEAS RADLUM THE SOW HAS BEEN DEVELOPED AND THE REQUEST FOR PROPOSAL PACKAGE DELIVERED TO PROCUREMENT. PRELIMINARY WORK INCLUDED THE ASSESSMENT OF PROJECTS IMPACT ON MFG RADIOLUMINOUS LAMPS. IT WAS AGREED THAT A STD SOURCE WOULD IMPROVE ACCURACY.	75.0		1.2	APR 85	APR 85

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M 84 6350 2934	APPL OF AN X-RAY TV SYSTEM FOR RECORD + PROC OF DIFFRAT PAT A POSITIONING DEVICE IS BEING CONSTRUCTED TO MORE ACCURATELY POSITION THE CARTRIDGE CASE IN THE X-RAY BEAM. EXPERIMENTS ARE UNDERWAY TO DETERMINE THE EFFECTS OF THE CARTRIDGE CASE ECCENTRICITY ON THE COMPUTED HARDNESS VALUE.	62.0		1.7	DEC 84	DEC 84
M 84 6350 2946	PROGRAMMABLE HIGH RESPONSE FUNCTIONAL ACCELERATION TESTER THE CONTRACT SOW FOR THE ESTABLISHMENT OF THE ACCELERATION TESTER WAS SUBMITTED TO PROCUREMENT 1 MAY 1984. THE PROCUREMENT IS IN FOUR PHASES, (I)DEV DESIGN CONCEPT, (II)DEV MODEL+PERFORM ENGR TESTS, (III)FABRICATE SYSTEM, (IV)CONDUCT ACCEPTANCE TEST.	109.0			JUL 86	JUL 86
M 84 6350 2965	BALLISTIC SIMULATOR - SHOCK TESTING OF ARMAMENT COMPONENTS SYSTEM LEVEL BLOCK DIAGRAMS FOR INSTRUMENTATION SYSTEM DESIGN HAVE BEEN PREPARED AND ARE BEING REVIEWED. SENSORS HAVE BEEN SELECTED AND ORDERED. SYSTEM REQUIREMENTS FOR IMPROVED TESTING EFFICIENCY HAVE BEEN IDENTIFIED AND DESIGN IS IN PROGRESS.	160.0			MAR 86	MAR 86
M 84 6350 2972	CAPILLARY GAS CHROMATOGRAPHIC TESTING OF SOLID PROPELLANTS A COOL 'ON-COLUMN' CAPILLARY INJECTOR WAS INSTALLED ON THE GAS CHROMATOGRAPH AND EVALUATED. ANALYSIS OF A STANDARD TEST MIXTURE CONTAINING NITROGLYCERINE, DIETHYLPHTHALATE, AND 2-NITRODIPHENYLAMINE ESTABLISHED THAT COMPONENT RECOVERY RESPONSE IS GOOD	120.0			FEB 85	FEB 85
M 84 6350 2978	TESTING AND EVALUATION OF QUARTZ CRYSTAL RESONATORS THE TECHNICAL GUIDELINES FOR THE PROGRAM WERE WRITTEN. A PMD WAS SUBMITTED TO PROCUREMENT AND A SOLICITATION WAS ISSUED ON A SOLE SOURCE BASIS. A REPLY TO THE SOLICIATION WAS RECEIVED AND A FAVORABLE TECHNICAL EVALUATION WAS MADE.	100.0			OCT 85	OCT 85
M 84 6350 2979	PHOTOLUMINANCE TESTING OF GAAS PHOTOCATHODES THE SOW HAS BEEN SUBMITTED TO PROCUREMENT. THE SOLICITATION RELEASE DATE WAS MAY 11, 1984. THE CONTRACT AWARD IS SCHEDULED FOR JULY 15, 1984.	230.0			AUG 85	AUG 85
M 84 6350 2980	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS CONTRACT WAS AWARDED ON 31 MAY 84. WORK STARTED TO DEFINE ADA PACKAGES USED IN THIS PROGRAM.	105.0			APR 85	APR 85
M 84 6350 2981	FLUIDIC POWER SUPPLY ACCEPTANCE TESTER THE BREADBOARD FOR THE SYSTEM WAS COMPLETED AND THE COMPUTER PHENOMATIC SYSTEM WAS INTEGRATED. THE TRAJECTORY SOFTWARE FOR THE MLRS IS ABOUT 90 PCT COMPLETE. ALSO, THE TEST BENCH HAS BEEN COMPLETED.	150.0			MAR 85	MAR 85

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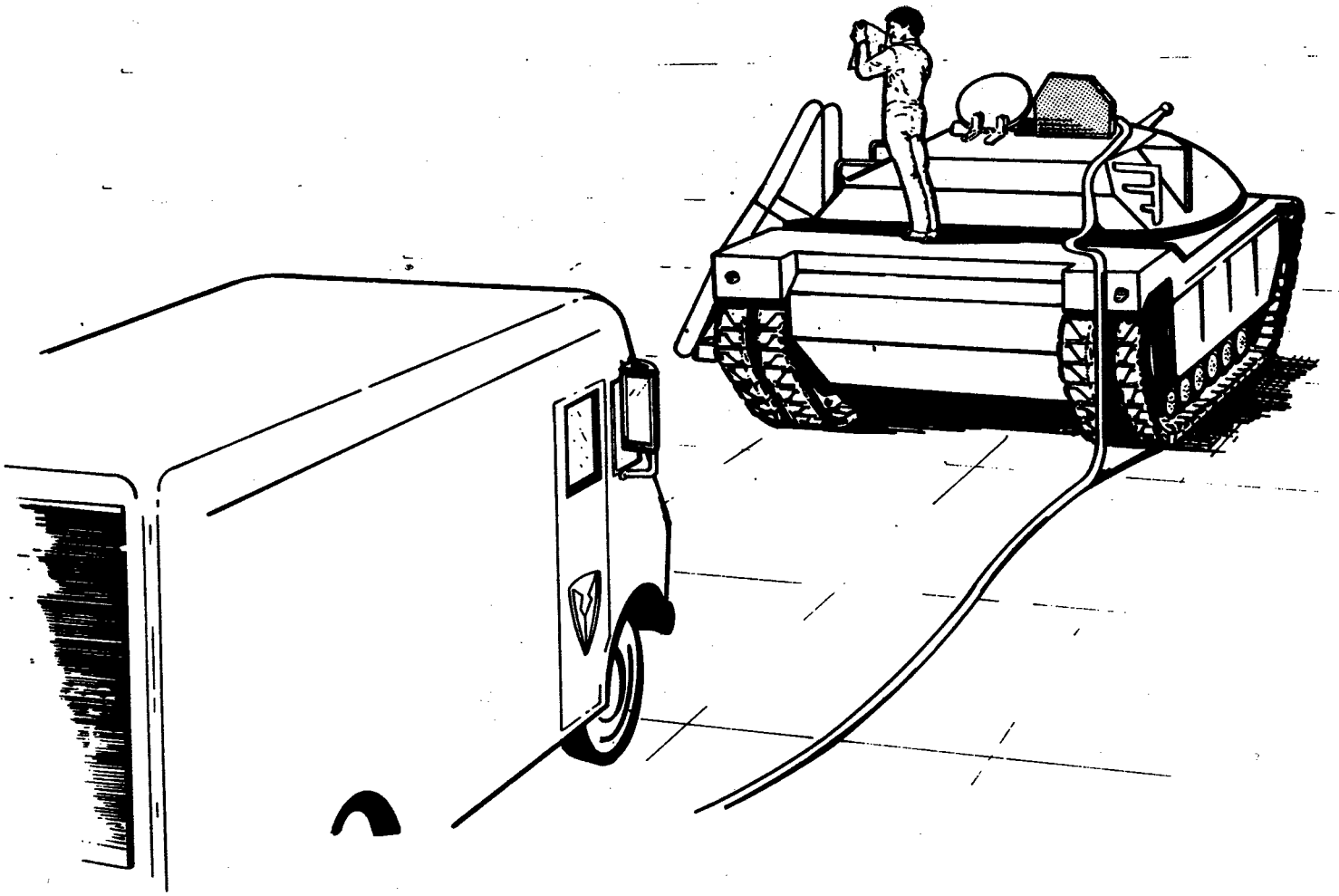
M 84 6350 3006	ACOUSTIC EMISSION MONITORING/CONTROL OF GUN TUBE STRAIGHTEN SEE PROJECT NO M 83 6350-3006 FOR STATUS.	15.0			SEP 84	SEP 84
M 84 6350 3010	DIGITAL IMAGE AMPLIFICATION X-RAY SYSTEM (DIAX) THE ENGINEERING FOR THE PROGRAM HAS BEEN COMPLETED. THE SOW FOR THE ALGORITHM MODIFICATION WAS WRITTEN AND INCORPORATED INTO A PROCUREMENT REQUEST WHICH WILL BE AWARDED THIS FISCAL YEAR.	110.0		0.5	JAN 85	JAN 85
M 84 6350 3015	METHODOLOGY FOR VERIFYING EDDY CURRENT + ULTRASONIC INSP THIS PROJECT IS A NEW START. THE SOW AND THE PROCUREMENT PACKAGE WERE PREPARED AND SUBMITTED TO PROCUREMENT.	84.0		0.3	JAN 86	JAN 86
M 84 6350 3017	AUTOMATED ACCURACY TARGET SCORING SYSTEM THE SOW HAS BEEN SUBMITTED TO PROCUREMENT. A TEST PLAN FOR EVALUATING THE PERFORMANCE OF THE SYSTEM FOR VARIOUS SMALL CALIBER AMMUNITION HAS BEEN PREPARED AND SUBMITTED TO THE PRODUCT ASSURANCE DIRECTORATE FOR REVIEW.	85.0			JUN 85	JUN 85
M 84 6350 3027	120 MM GUN TUBE CHROME PLATE EVALUATION SYSTEM THE INITIAL INVESTIGATION AND MARKET SEARCH OF AN AUTOMATED SYSTEM IS IN-PROCESS.	27.0			JUL 86	JUL 86
M 84 6350 3045	FLUIDIC GENERATOR HIGH ALTITUDE SIMULATOR SINCE THIS PROGRAM JUST STARTED DUE TO THE LATE ARRIVAL OF FY84 FUNDS, ONLY THE MAJOR COMPONENTS HAVE BEEN ORDERED.	100.0			MAR 85	MAR 85
M 84 6390	PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLISH THE MANTECH JOURNAL. ESTABLISH THE MANUFACTURING TECHNOLOGY INFORMATION ANALYSIS CENTER (MTIAC).	250.0	242.0		MAR 85	MAR 85

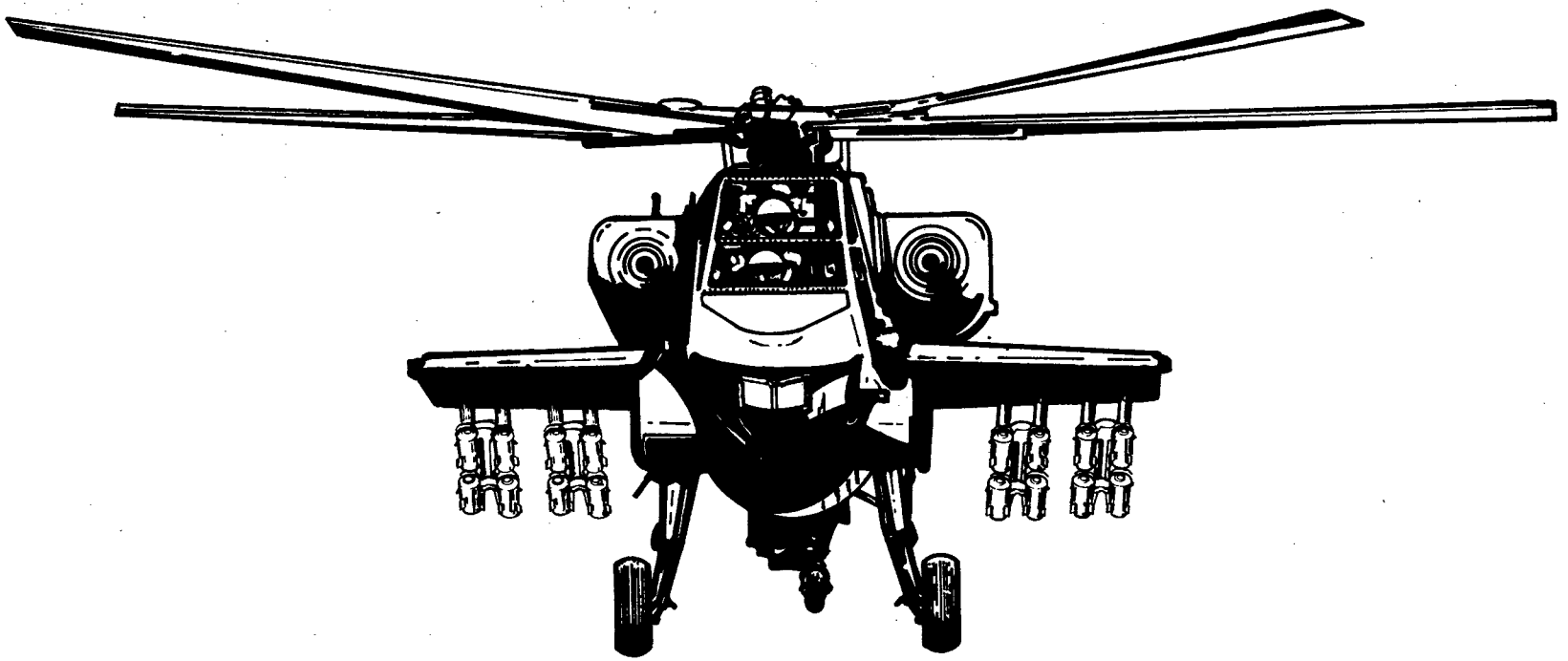


TEST AND EVALUATION COMMAND
(TECOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
0 78 5071	37	MILITARY VEHICLE ROLL OVER TESTS	735
0 79 5071	37	MILITARY VEHICLE ROLL OVER TESTS	881
0 80 5071	43	TEST AUTOMATION DEVELOPMENT	822
	57	GENERAL PURPOSE BIT SLICE MICRO-COMPUTER	
	59	SOLAR POWERED INSTRUMENTATION VAN	
	60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS	
	71	IMPROVED COPPER CRUSHER GAGE	
0 81 5071		TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES	770
	01	ACCEPTANCE TEST PROCEDURES	
	10	TEST OPERATION PROCEDURES	
	37	ROLLOVER TEST OF MILITARY VEHICLES	
	43	TEST AUTOMATION DEVELOPMENT	
	57	GENERAL PURPOSE BIT SLICE MICRO-COMPUTER	
	59	SOLAR POWERED INSTRUMENTATION VAN	
	60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS	
	71	COPPER CRUSHER PRESSURE GAGES	
	76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM	
	77	ELECTROMAGNETIC RADIATION EFFECTS/SUSCEPTIBILITY OF ARMY MAT	
	96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM	
0 82 5071		TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES	726
	01	ACCEPTANCE TEST PROCEDURES	
	10	TEST OPERATIONS PROCEDURES	
	100	AUTO PARTICLE CONTAMINATION MEAS IN HYDRAULIC OIL	
	37	ROLLOVER TEST OF MILITARY VEHICLES	
	43	TEST AUTOMATION	
	57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER	
	59	SOLAR POWERED INSTRUMENTATION VAN	
	71	COPPER CRUSHER PRESSURE GAGES	
	76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM	
	77	ELECTROMAGNETIC RADIATION EFFECTS + SUSCEPTIBILITY OF ARMY MAT	
	81	BINARY MUNITIONS PRODUCTION TEST METHODOLOGY	
	90	TOXIC GAS ANAL BY GAS CHROMATOGRAPHY	
	95	RAPID EVALUATION OF ENVIRONMENTAL HAZARDS	
	96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM	
	97	IMP METH FOR PERFORMANCE TESTING MORTARS AT EXTREME TEMP	
0 83 5071		TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES	438
	01	ACCEPTANCE TEST PROCEDURES	
	10	TEST OPERATIONS PROCEDURES	
	43	TEST AUTOMATION	
	57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER	
	71	IMPROVED COPPER CRUSHER PRESSURE GAGES	
	76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM	
*0 84 5071		TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES	1012

*This project was just funded and does not require a status report for this period.



AVIATION SYSTEMS COMMAND
(AVSCOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
1 81 7143		CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE	280
1 82 7143		CERAMIC HIGH-PRESSURE GAS PATH SEAL	685
1 81 7288		MMT DETERMINATION OF OPTIMAL CURING CONDITIONS	175
1 81 7319		PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH	50
1 81 7376		AUTO INSPECT AND PRECISION GRINDING OF SB GEARS	215
1 82 7376		AUTO INSPECT AND PRECISION GRINDING OF SB GEARS	1012
* 1 84 7378		STAINLESS STEEL GEARBOX HOUSING	400
1 84 7383		MOLDED HARDWARE FOR TWO AXIS DRY GYROS	465
1 82 7426		MMT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS	110
1 83 7427		ATTACK HELICOPTER PRODUCTIVITY IMPROVEMENT (API) PROGRAM	1415
1 83 7433		MMT - IPI PGM - BELL HELICOPTER, INC. - AHIP	1034
* 1 84 7443		ROBOTICS FOR HIGH PRODUCTIVITY FORGINGS	115
1 83 7465		ADVANCED COMPOSITE SENSOR SUPPORT STRUCTURE (ACS-3)	572
1 84 7465		FABRICATION TECH F/ADVANCED COMPOSITE SENSOR SUPPORT STRUCT	515
7 82 8192		TURBINE ENGINE PRODUCTIVITY IMPROVEMENT	2559
7 84 8198		T-700 TURBINE ENGINE MFG PRODUCTIVITY IMPROVEMENT	100

***These projects were just funded and do not require a status report for this period.**

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 81 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES THE PROGRAM COMPLETION DATE HAS BEEN REVISED DUE TO PROBLEMS ENCOUNTERED WITH POST-FORGE PROCESSING. 1 BLADE AIRFOIL TWIST HAS CONSIDERABLE VARIATION + -. BLADE CHORDAL WIDTH IS NOT WITHIN TOLERANCE. SEVERAL OPTIONAL PROGRAMS ARE BEING DISCUSSED.	190.2	124.4	65.8	NOV 82	JAN 85
1 82 7119	NON-DESTRUCTIVE EVALUATION TECH FOR COMPOSITE STRUCTURES DRAFT REPORTS OF STATE-OF-THE-ART REVIEWS ON RADIOGRAPHY, ULTRASONICS, AND ACOUSTIC EMISSION HAVE BEEN COMPLETED. ALL WORK ON SECTIONS OF THE HANDBOOK CONCERNING THERMOGRAPHY AND QA RELATING TO THE AH-1 COMPOSITE BLADE HAVE BEEN COMPLETED.	500.0	127.0	365.7	NOV 83	DEC 84
1 84 7187	POWDER METALLURGY GEARS FOR HELICOPTER APPLICATIONS SCOPE OF WORK APPROVED FOR CONTRACT. CONTRACT PLANNED TO BE LET BY 14 DEC 84.	400.0		43.0	AUG 85	AUG 85
1 82 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING ROTOR LIFE SUBSTANTION UPDATED. THIRD SPIN PIT TEST COMPLETED AT 200 DEGREES FARENHEIT. DRAFT FINAL REPORT SUBMITTED.	317.0	290.5	26.3	SEP 82	DEC 84
1 81 7202	APPLICATION OF THERMUPLASTICS TO HELICOPTER SECONDARY STRUC THE FINAL TECHNICAL REPORT IS IN THE PROCESS OF BEING PRINTED.	185.0	127.6	57.4	OCT 81	SEP 84
1 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS TWO PRELIMINARY DAMPER BRACKETS WERE ASSESSED FOR MECHANICAL PROPERTIES AND MICRO-STRUCTURE. ALL OF THE TESTED VALUES WERE ACCEPTABLE. SCHEDULING FOR FULL SCALE TESTING HAS BEEN ACCOMPLISHED.	500.0	309.0	151.8	JAN 83	NOV 84
1 82 7285	CAST TITANIUM COMPRESSOR IMPELLERS TEST BARS AND IMPELLER SECTIONS WERE TESTED WITH THE RESULTS FAVORABLE TO WROUGHT TI-64. A CAST IMPELLER WAS SUCCESSFULLY TESTED AT 139 PERCENT DESIGN SPEED.	429.0	233.0	38.0	MAR 84	SEP 84
1 82 7286	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS NO WORK ACCOMPLISHED DURING REPORTING PERIOD. PROBLEMS AT NUCLEAR METALS (NM) CONTINUE TO PLAGUE SCHEDULE. GE + NM FUNDING A GET-WELL EFFORT TO PREVENT OXIDE CONTAMINATION PROBLEMS FROM REOCCURRING.	360.0	300.0	52.0	APR 85	DEC 85
1 82 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER TOOLING MOD AND MACHINING COMPLETED. CONSOLIDATION OF FOUR IMPELLERS AND FOUR PANCAKES COMPLETED. SHAPE AND METALLURGICAL EVALUATIONS UNDERWAY.	275.0	210.0	30.0	MAR 84	DEC 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 82 7298	HIGH TEMPERATURE VACUUM CARBURIZING THE PROCESSING SPECIFICATION FOR AISI 9310 HAS BEEN FINALIZED. ROLLING CONTACT FATIGUE, 4-SQUARE GEAR TEST SCORING, AND SINGLE TOOTH BENDING TESTS HAVE BEEN COMPLETED. THESE SPECIMENS HAVE EQUIVALENT LIVES TO CONVENTIONAL GAS CARBURIZED SPECIMENS.	240.0	180.5	52.5	APR 83	SEP 84
1 83 7298	HIGH TEMPERATURE VACUUM CARBURIZING THE CONTRACT FOR PHASE II IS UNDERWAY TO QUALIFY HIGH TEMPERATURE VACUUM CARBURIZING FOR CRITICAL HIGH PERFORMANCE POWER TRANSMISSION COMPONENTS IN HELICOPTERS. AT LEAST TWO SUPPLIERS WILL BE QUALIFIED TO CARRY OUT HIGH TEMPERATURE VACUUM CARBURIZING	375.5	340.0	35.5	SEP 84	MAR 85
1 84 7298	HIGH TEMPERATURE VACUUM CARBURIZING THIS PROJECT IS A CONTINUATION OF FY83 WORK TO QUALIFY HIGH TEMPERATURE CARBURIZING FOR CRITICAL HIGH PERFORMANCE POWER TRANSMISSION COMPONENTS IN HELICOPTERS.	400.0		41.0	SEP 85	SEP 85
1 84 7300	IMPROVED LOW CYCLE FATIGUE (LCF) CAST ROTORS PILOT PRODUCTION COMPLETED. PREPARATION FOR TEST PHASE UNDERWAY.	350.0	190.0	35.0	JUN 85	JUN 85
1 84 7302	PRODUCTION OF BORIDE COATED LONG LIFE TOOLS WORK IS PROCEEDING TO PLACE A CONTRACT.	400.0		80.0		
1 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER FIFTEEN LAMILLOY ASSEMBLIES HAVE BEEN FABRICATED. THE SPECIMEN TEST PLAN HAS BEEN APPROVED. THE PROCESS SPECIFICATION PLAN HAS BEEN SUBMITTED FOR REVIEW.	530.0	460.0	70.0	MAR 85	MAR 85
1 82 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES THE DRAFT FINAL REPORT HAS NOT BEEN REVISED AS PER AVSCOM INSTRUCTIONS. THE REPORT WILL BE REVISED AND RESUBMITTED IN THE NEXT REPORTING PERIOD.	93.0	56.4	26.6	APR 84	SEP 84
1 84 7344	RIM MOLDING OF HELICOPTER COMPONENTS WORK TO PLACE THE CONTRACT IS IN PROCESS.	175.0		2.0	AUG 85	AUG 85
1 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES WORK WAS TERMINATED ON THE CURRENT PROCESS BECAUSE OF POOR RESULTS. A NEW FIBER AND PROCESSING TECHNIQUE, SILICON CARBIDE FILAMENT AND THE DRY WOVEN TECHNIQUE, IS BEING ADOPTED. A NEW SCOPE OF WORK IS BEING PREPARED.	325.0	250.0	60.0	SEP 83	SEP 85
1 84 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) WORK CONTINUED ON THE IRIM REAL TIME INSPECTION SOFTWARE WHICH CONTROLS THE HIGH SPEED IMAGE DATA ACQUISITION CIRCUITRY. WORK ALSO CONTINUED ON UPDATING IRIM SOFTWARE DOCUMENTATION TO REFLECT RECENT REVISIONS AND ADDITIONS TO ON-LINE INSPECTIONS.	525.0	465.0		DEC 84	DEC 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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1 83 7382	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A IN-HOUSE EFFORTS WERE CONTINUED, AND INCLUDED THE RESOLUTION OF CURING PROBLEMS EXPERIENCED WITH THE PRECURED SPAR AND THE PLACING OF A CONTRACT. CONTRACTOR WORK WILL CONSIST OF TESTS TO DETERMINE SPAR CURING REPEATABILITY.	446.0	30.0	413.0	SEP 84	SEP 84
1 84 7382	LOW-COST COMPOSITE MAIN BLADE FOR THE UH-60A THE CONTRACT FOR PHASE III WAS PLACED. PHASE II, FABRICATION OF FULL-SIZED BLADES, WAS COMPLETED. PHASE III, MANUFACTURING PROCESS VERIFICATION TESTING AND DESIGN UPDATE, IS NEARING COMPLETION. FATIGUE AND STATIC TESTING WAS COMPLETED.	700.0	477.0	25.0	SEP 84	SEP 84
1 84 7384	COMPOSITE ENGINE GEARBOX HOUSING WORK WAS INITIATED TO PLACE THE CONTRACT PORTION OF THE WORK.	650.0		50.0		
1 84 7389	PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS PREPARATION FOR FULL-SCALE TOOLING HAS BEEN INITIATED. TOOLING PROJECTED COMPLETION 7/20/84.	417.0	332.0	40.0	JUN 85	JUN 85
1 82 7415	MMT T700 BLISK REPAIR COMPONENT CORROSION AND HIGH CYCLE FATIGUE (HCF) TESTS ARE COMPLETED. ALL CORROSION COUPONS MET THE SPEC. REQUIREMENTS. THE HCF TESTS INDICATED A 10 PERCENT REDUCTION IN ENDURANCE LIMITS.	900.0	602.2	199.6	MAR 85	JUN 85
1 84 7416	ADVANCED TURBINE AIRFOIL CASTINGS FOR LONG LIFE PROCUREMENT HAS BEEN INITIATED.	400.0		40.0	DEC 86	DEC 86
1 84 7417	LOW-COST DISKS BY LAP -CONSOLIDATION BY ATMOSPHERIC PRESSURE PROJECT RECENTLY FUNDED. PROCUREMENT INITIATED.	300.0	250.0	30.0	JUN 87	JUN 87
1 84 7468	INTEGRATION OF ADVANCED REPAIR BONDING $415,000 HAS BEEN MIPRED TO THE AIR FORCE. THE WORK WILL BE PERFORMED AT SACRAMENTO AIR LOGISTIC CENTER. AN 'AS-IS' ANALYSIS HAS BEEN COMPLETED. AN FABRICATION OF FIXTURES HAS BEEN INITIATED. PROJECT RESULTS WILL BE IMPLEMENTED AT CCAD.	515.0		35.0	JUN 86	JUN 86
1 84 7470	HAND HELD AUTOMATIC POWER CRIMPER A COMPETITIVE PROCUREMENT PACKAGE WAS DEVELOPED FOR PROSPECTIVE BIDDERS AND THE RFP FINALIZED.	218.0		40.0	FEB 86	FEB 86
1 84 7471	PROCESS CONTROL SYSTEM FOR N/C AND CNC MACHINES NO WORK ACCOMPLISHED TO DATE, AS REPORTED ON FIRST 301. COMPLETION DATE TO BE ESTABLISHED AT TIME OF CONTRACT AWARD.	200.0		33.0		
1 84 7473	MMT - FIBER REINFORCED THERMOPLASTIC STRUCTURES WORK HAS BEEN INITIATED TO PLACE THE CONTRACT.	150.0		10.0		

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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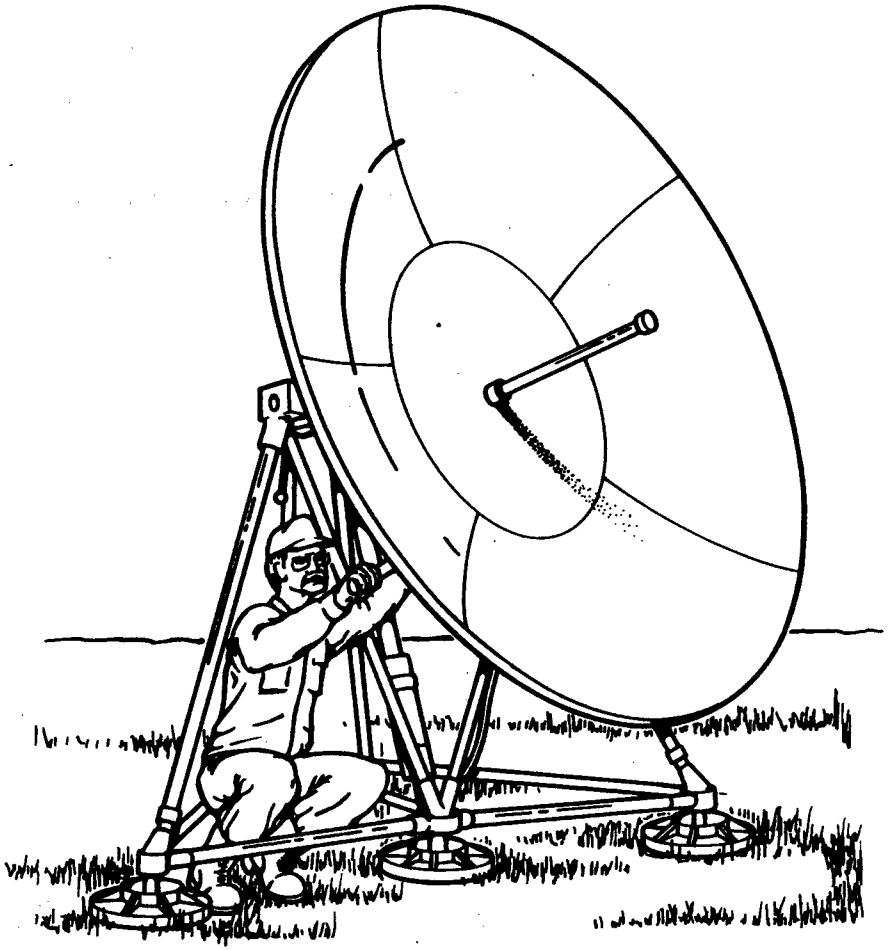
1 84 7474	SINGLE CURE TAIL RETUR WORK WAS INITIATED TO PLACE THE CONTRACT.	180.0		7.5	NOV 85	NOV 85



COMMUNICATIONS AND ELECTRONICS COMMAND (CECOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
*2 84 3068		INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES	250
F 82 3083		MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM)	1090

*This project was just funded and does not require a status report for this period.

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 3050	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS RCA QUEBEC HAD 1ST ENGINEERING SAMPLES FAIL DUE TO HIGH JUNCTION LEAKAGE CAUSED BY EPOXY OUTGASSING. THIS PROBLEM WILL NOT OCCUR IN FUTURE DEVICE SINCE NO EPOXY WILL BE USED INTERNAL TO THE PACKAGE. DEVICE SPECIFICATION HAS BEEN MODIFIED.	670.0	588.2	37.0	DEC 83	SEP 85
F 80 3054	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES DISCOVERED PLATED THROUGH HOLE CRACKING (PTH), FLEXIBLE LAYER DELAMINATION, + POLYIMIDE ADHESIVE OUTGASSING IN CIRCUIT BOARDS. PTH PROBLEM WAS RESOLVED BUT OTHER MATERIAL PROBLEMS STILL PERSIST. SINCE 1981 ONLY 10 GOOD BOARDS HAVE BEEN BUILT.	780.0	706.0	73.5	SEP 82	APR 85
F 81 3056	ELECTROLUMINESCENT NUMERIC MODULES ROCKWELL COLLINS ADVISED GOVT THAT WORK COULD NOT BE COMPLETED WITH EXISTING FUNDS. WORK SCOPE WAS REDUCED TO 192 X 320 ELEMENT DMD PANEL. 20 DMD PANELS WERE BUILT BUT NONE ARE FUNCTIONAL. VENDOR IS FOCUSING ON IMPROVING ETCHING, + LAYER DEPOSITION.	1,270.7	1,131.7	139.0	DEC 82	AUG 84
F 81 3057	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FEI IS SETTING UP AUTOMATIC EQUIPMENT FOR X-RAY ORIENTATION, ANGLE CORRECTION, PLATING, BONDING, + SEALING. CRACKS DISCOVERED IN FLATPACK COVERS HAVE HAMPERED PROGRESS. PURIFYING METALLIZATION PROCESS + NEW CLEANING PROCEDURE SHOULD CORRECT PROBLEM.	1,261.3	1,193.6	67.7	JUL 83	DEC 85
F 83 3068	INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES WORK ON THE GAAS VARACTOR IS CONTINUING TO REDUCE THE RESISTANCE OF THE BONDING STRAP. THE C-SPRING PACKAGE DESIGN HAS BEEN SELECTED FOR THE SILICON PIN DIODE BECAUSE OF HIGH YIELD. A MEDIUM TEMPERATURE SILICON DIOXIDE/NITRIDE PASSIVATION IS USED.	215.0	210.0		JUL 85	JUL 85
F 82 3073	TACTICAL GRAPHICS DISPLAY PANEL GTE DETERMINED THAT MAJOR FLUCTUATIONS IN DEPOSITION PROCESSES WERE CAUSED BY A DEFECTIVE TEMPERATURE SENSOR. GOVT WILL NOT BE CHARGED FOR DELAYS CAUSED BY DEFECTIVE PANELS. CALIBRATIONS ARE NOW IN PROGRESS TO ACHIEVE PREVIOUS LUMINANCE + UNIFORMITY.	950.0	881.6	68.4	OCT 84	NOV 84
F 83 3094	COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS ROCKWELL COLLINS, CEDAR RAPIDS, INTEGRATED 2 VAX 11 COMPUTERS WITH A CAD/CAM SYSTEM, A UNIVERSAL DIP INSERTER AND AN IBM PC TO DEMONSTRATE DNC OF THE DIP INSERTER. ALSO DEMONSTRATED ROBOTIC ASSISTED MECHANICAL PARTS PREPARATION.	1,065.4	1,043.7	18.5	SEP 84	NOV 85
2 84 3094	COMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS (CAM) SINGER KEARFOTT WILL COMPUTERIZE PART OF ITS INCUMING INSPECTION, ITS ASSEMBLY AND SOLDERING CENTERS, AND ITS MODULE TEST CENTER. LOOKED AT PARTS HANDLERS, MATERIAL FLOWS,MECHANICAL INSP MACH, TEST SOFTWARE, RESISTOR TESTERS, AND COMPUTER INTERFACES.	1,352.0	1,352.0		OCT 85	OCT 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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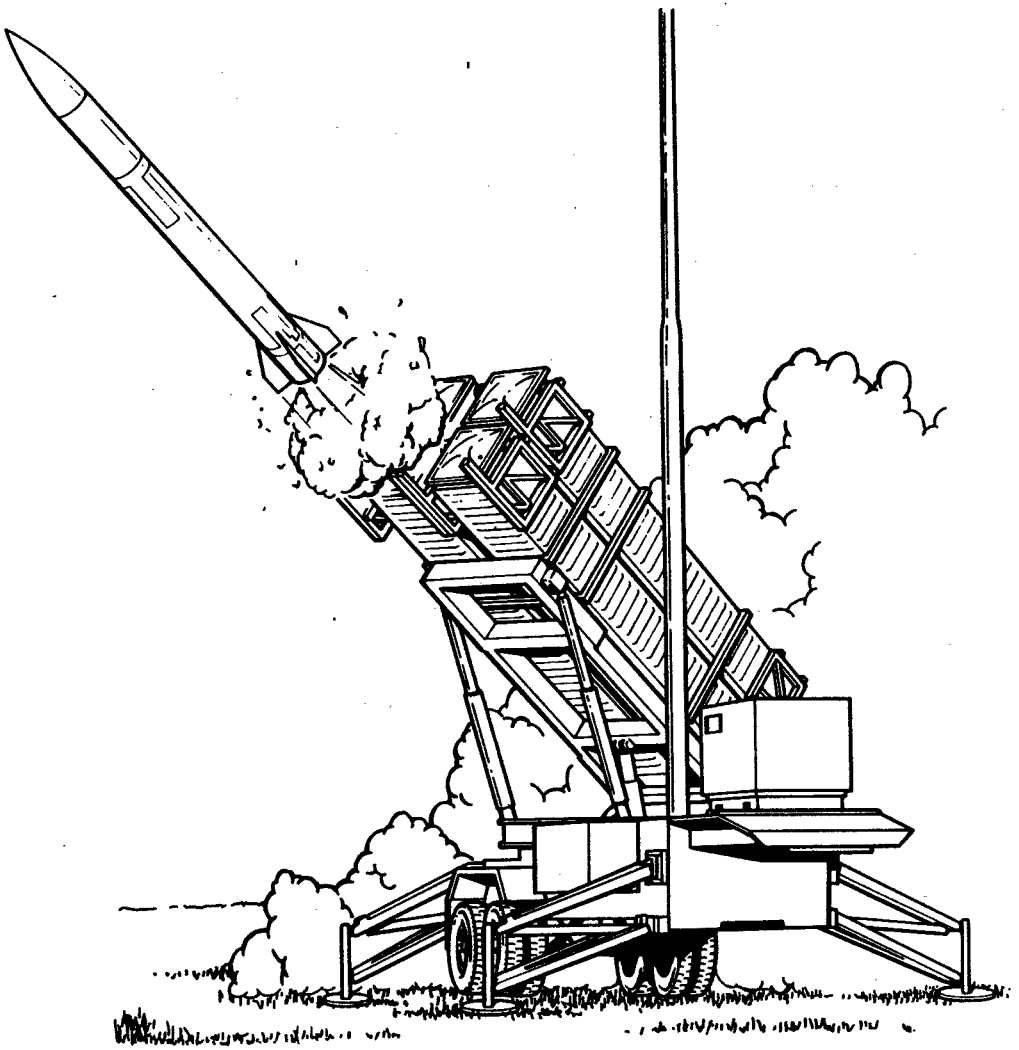
F 81 9851	TACTICAL MINIATURE CRYSTAL OSCILLATORS BENDIX BUILT + TESTED 25 TMXO DEVICES. VACUUM ASSEMBLY PROCESSES INCLUDED BRAZING, BONDING, CLEANING, OUTGASSING, + SEALING. RADIATION TESTS WERE CONDUCTED AT HDL (1 UNIT) + AT ABERDEEN (2 UNITS). PRELIMINARY PRODUCT SPEC PER MIL-O-55310B WAS WRITTEN	1,067.2	1,057.2	10.0	MAR 84	MAY 85
2 78 9898	RUGGEDIZED TACTICAL FIBER OPTIC CABLES ITT COULD NOT MEET THE LOW TEMPERATURE 6 FIBER CABLE SPEC. COMPENSATION IS DELIVERY OF 16 CABLES OF 2 FIBERS EACH. THESE MEET THE SPECS. THIS PROJECT RESULTED IN A LINE CAPABLE OF 40KM OF 2 FIBER CABLE IN A 40 HOUR WEEK.	314.5	292.5	24.0	NOV 79	SEP 84
F 79 9938	THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT WORK ON THIS PROGRAM IS COMPLETE EXCEPT FOR THE FINAL REPORT. AN INDUSTRY DEMONSTRATION WAS HELD ON 20 SEPT 83. THE ARMY SYSTEM THAT THIS PROJECT SUPPORTED HAS BEEN PHASED OUT HOWEVER, THE AIR FORCE AND MARINES MAY HAVE APPLICATIONS.	550.0	497.0	58.0	SEP 81	JAN 85



MISSILE COMMAND
(MICOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
3 84 1051		REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS	150
3 83 1060		ELECTRICAL TEST AND SCREENING OF CHIPS	395
3 81 3449		ALTERNATE PROCESS FOR IPDI	250
3 83 3449		ALTERNATE PROCESS FOR IPDI	150
3 84 3449		ALTERNATE PROCESS FOR IPDI	150

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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3 83 1051	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS ALL TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL TECHNICAL REPORTS DESCRIBING EACH OF THE SUBTASKS ARE NEARING COMPLETION. THE PROJECT HAS BEEN SUCCESSFUL IN ESTABLISHING ALTERNATIVE INHIBITOR AND INSULATOR MATERIALS TO ASBESTOS.	380.0	346.8	33.2	APR 84	DEC 84
3 84 1060	ELECTRICAL TEST AND SCREENING OF CHIPS CONTRACT WAS AWARDED TO TELEDYNE TAC TO CONTINUE THIS EFFORT. WORK IS IN PROGRESS TO DESIGN, BUILD AND TEST A CHIP TESTING SYSTEM. ASSEMBLY OF THE SYSTEM IS IN PROGRESS.	1,000.0	713.9	125.0	DEC 84	DEC 84
3 81 1075	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BATTELLE REVISED THE MASTER PLAN AS REQUESTED BY MICOM AND AMCCOM. THE FOUR VOLUMES ARE BEING PRINTED. THEY INCLUDE IDEF DIAGRAMS OF MOST ELECTRONICS DESIGN, MANUFACTURING AND TEST STEPS. ALSO, DESCRIPTIONS OF 52 PROPOSED PROJECTS AND 9 DEMO CELLS.	700.0	552.9	147.1	SEP 81	DEC 84
3 83 1075	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) MICOM ACCEPTED THE FINALIZED MASTER PLAN + ALL 4 VOLUMES OF THE FINAL REPORT THEY INCLUDE MANY DIAGRAMS OF ELECTRONIC DESIGN, BUILD + TEST. THEY DESCRIBE 52 PROPOSED MMT PROJECTS AND 9 DEMONSTRATION CELLS, 3 SERVICES WILL PURSUE 2 AREAS EACH.	265.0			DEC 86	DEC 86
3 84 1075	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) A CONTRACTOR WILL DEVELOP PRELIMINARY SPECS, INTEGRATION GUIDELINES AND CONCEPTS FOR A TEST BED OR CELL FOR CABLE AND HARNESS ASSEMBLY. A CABLING MACHINE WILL BE EXPANDED TO SEE HOW IT WILL FIT IN WITH THE FACTORY OF THE FUTURE. IS A NEW ECIM EFFORT.	1,000.0			DEC 84	DEC 84
3 82 1076	AUTOMATIC RECOGNITION OF CHIPS KULICKE + SOFFA COMPLETED HARDWARE FOR AN AUTOMATIC OPTICAL CHIP RECOGNITION, + PICK + PLACEMENT SYSTEM. SOFTWARE SCHEDULED INCLUDES VIDEO, PERIPHERAL SENSORS, + DIAGNOSTICS (SELF TEST + FAULT ISOLATION). $174K PROVIDED BY AF EXTENDED WORK TO DEC 84.	700.0	495.8	204.1	FEB 84	DEC 84
3 83 1086	COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS ALL TASKS WITH THE EXCEPTION OF C(4) PREPARATION OF MFG PROCEDURES + FINAL REPORT HAVE BEEN COMPLETED. AN INDUSTRY DEMONSTRATION WAS HELD AT MARQUADT CORP. 21 JUNE 84. THE FINAL REPORT IS BEING PREPARED. MILESTONE CHART 7/30/84 FINAL REPORT.	500.0	452.7	47.3	DEC 84	JUL 84
3 82 1088	OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES ALL WORK IS NOW COMPLETED EXCEPT FOR THE FINAL REPORT AND THE INDUSTRY DEMONSTRATION. THE FINAL REPORT WILL BE COMPLETED AFTER THE DEMONSTRATION. CURRENT PLANS ARE TO FINISH EVERYTHING BY THE END OF SEPT/84.	400.0	305.2	76.4	MAY 83	SEP 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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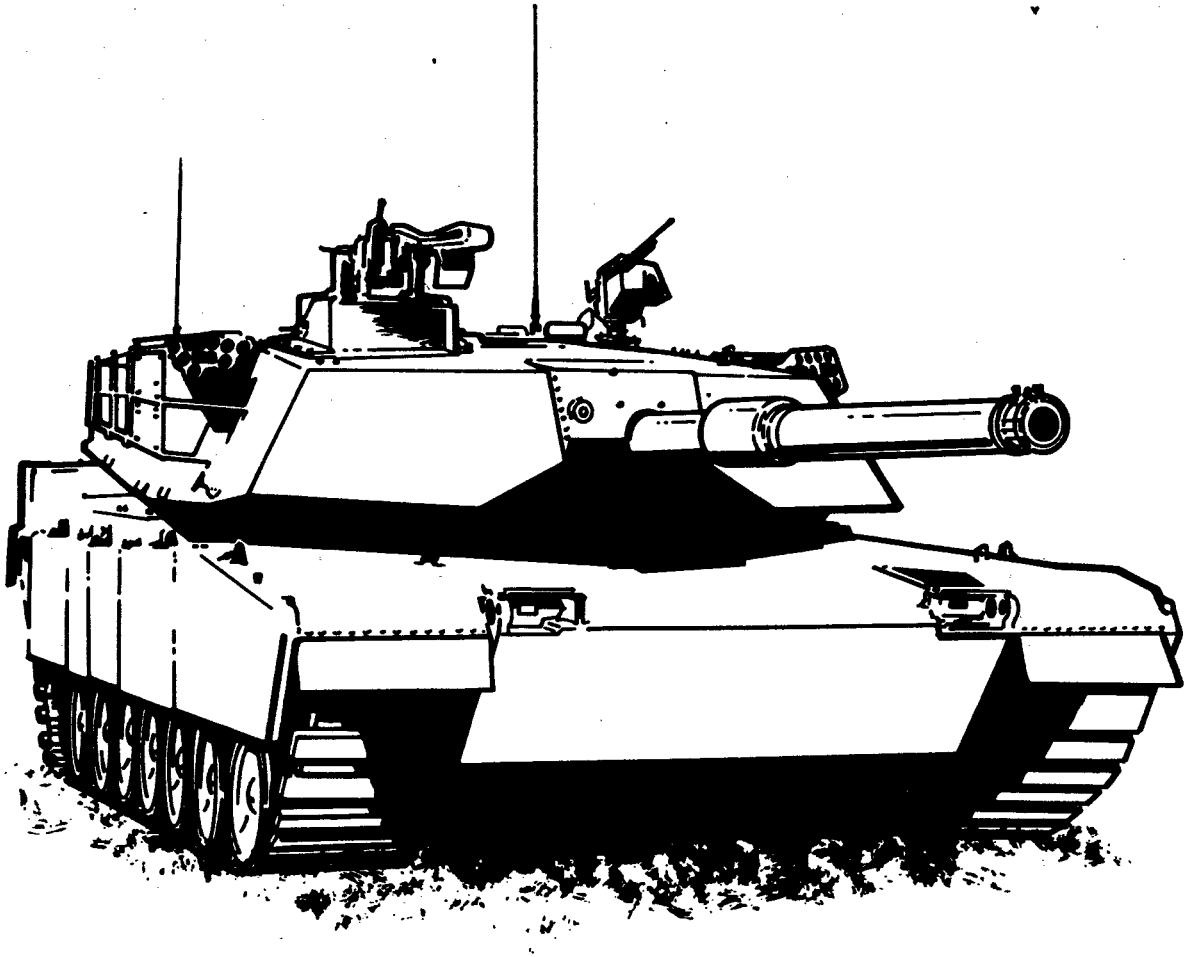
3 84 1089	INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS EXPERIMENTAL FILAMENT WINDING AND AUTOMATED LAYUP TECHNIQUES WERE TESTED ON SUBSCALE MOTOR CASES HAVING INTEGRAL ATTACHMENTS.	355.9	355.9		OCT 84	OCT 84
3 84 1109	ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM ALL LONG LEAD-TIME EQUIPMENT IS ON ORDER. THE MAJOR PRICES OF EQUIPMENT THAT HAVE BEEN RECEIVED ARE BEING MODIFIED AS NECESSARY AND INTEGRATED INTO THE SYSTEM. THE NECESSARY SOFTWARE IS UNDER DEVELOPMENT.	1,000.0	710.4	289.6	AUG 85	AUG 85
3 84 1124	SCANNING TDI FOCAL PLANE ARRAY DETECTORS FUNDS WERE MIPRED TO NV+EOL FOR USE ON SBR AND TI CONTRACTS. THEY ARE GROWING N AND P TYPE HG-CD-TE ON CD-ZN-TE CRYSTALS USING LIQUID PHASE EPITAXY, WORKING ON MTL PREPARATION, FURNACE + AMPULE DESIGN, AND OPTIMUM GROWTH PARAMETERS. ALSO ON ARRAYS.	800.0	750.0	7.0	OCT 86	OCT 86
3 84 1126	WOUND ELASTOMER INSULATOR PROCESS THIS THIRD AND FINAL PHASE OF THE PROGRAM WAS AWARDED ON CONTRACT TO HERCULES ON 8 DEC 83. ALL CASES HAVE BEEN WOUND AND ARE READY TO BE DELIVERED. CONTRACT HAS BEEN EXTENDED FOR THREE MONTHS. FINAL REPORT AND VIDEO TAPES ARE ON SCHEDULE.	450.0	433.8	3.6	SEP 84	SEP 84
3 82 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES THE UNIFORMITY AND PROPERTIES THE DELIVERABLE MOTOR NOZZLES WERE VERIFIED. FIFTY NOZZLES WILL SOON BE DELIVERED TO MICOM. THE PREPARATION OF A FINAL REPORT AND MANUFACTURING PROCEDURES IS NEARING COMPLETION.	500.0	375.3	124.7	JUL 83	DEC 84



TANK-AUTOMOTIVE COMMAND
(TACOM)

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 77 3749	HYDRAULIC ROTORY ACTUATORS SEE MMT E 81 3749.	750.0	742.2		MAY 79	DEC 84
E 80 3749	HYDRAULIC ROTARY ACTUATORS SEE MMT E 81 3749.	145.0	133.9		DEC 81	DEC 84
E 81 3749	HYDRAULIC ROTARY ACTUATORS FOR M9 CONTRACTOR HAS REQUESTED 3 MONTH EXTENSION ON CONTRACT. REPLY IS BEING CONTEMPLATED. IT IS ESTIMATED THAT PRESENT FUND WILL COVER THE APPROXIMATE 150 HOURS ENDURANCE TESTING STILL REQUIRED.	157.0	150.0		JUL 81	DEC 84
T 82 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES DEOXIDANTS PROVED SUCCESSFUL, SHOWING SOUND, POROSITY FREE WELDS TO BE OBTAINABLE WITH CORWELD TO TUBULAR METAL ELECTRODE.	248.0	224.0	13.0	OCT 84	JAN 85
4 83 5005	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE II) THE DIMENSIONAL DATA OF THE SELECTED SPUR AND HELICAL GEARS HAVE BEEN TRANSFERRED FROM DRAWINGS INTO COMPUTER COMPATIBLE INFORMATION USING THE PROGRAM DEVELOPED IN PHASE I OF THIS EFFORT. DIES HAVE BEEN MFG FOR ELECTRO DISCHARGE MACHINING (EDM).	376.0	346.0	24.0	OCT 85	APR 85
T 82 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYS UNIV. OF PITTSBURGH IS EXPANDING GEOMETRIC CAPABILITIES OF THE CURRENT CAD SYSTEM. THE CAD/CAM PROCEDURE AND TECHNICAL MANUALS GENERATED UNDER PRIOR EFFORTS WILL BE MODIFIED ACCORDINGLY.	100.0	80.0	18.0	MAR 84	NOV 84
T 82 5019	STORAGE BATTERY LOW MAINTENANCE PROTOTYPE BATTERIES COMPLETED TESTS AT YPG, CRTC AND IN THE LABS. PROTOTYPE PERFORMANCE CHARACTERISTICS RESULTS EXCEEDED EXPECTED REQUIREMENTS. A PERFORMANCE AND PROCUREMENT SPECIFICATION HAS BEEN DRAFTED FOR THE NEW 2HL BATTERY.	115.0		100.0	JAN 84	AUG 84
T 82 5024	GEAR DIE DESIGN + MFG UTILIZING COMPUTER TECHNOLOGY (CAM) THE INDUCTION HEATER FOR THE MACHINE PERFORMS HAS BEEN DESIGNED AND CONSTRUCTED. THE FORGE TOOLING IS COMPLETED. THE GRAPHITE ELECTRODE USED TO EDM THE TOOTH FORM INTO THE DIE BLOCK WERE MEASURED TO ASSURE THE ACCURACY OF THE DIES.	375.0	289.0	67.0	OCT 83	DEC 84
T 82 5053	FABRICATION TECHNIQUES FOR HI STRENGTH STRUCTURAL CERAMICS THE CONTRACTOR HAS ESTABLISHED THE BASIC MATERIAL TECHNOLOGY FOR MONOLITHIC CERAMIC AND CERAMIC COATED COMPONENTS. THE EDITED DRAFT TECHNICAL REPORT HAS BEEN RETURNED TO THE CONTRACTOR FOR REVISION.	563.0	403.0	138.0	JUN 83	DEC 84
4 83 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE II) THE CONTRACTORS ARE OPTIMIZING THE MATERIAL TECHNOLOGY PREVIOUSLY ESTABLISHED. THIS INCLUDES SURFACE SEAL COATINGS, THERMAL CONDUCTIVITY, LONG TERM STABILITY TESTS, AND BRAZING MATERIALS.	402.0	262.0	58.0	FEB 85	JAN 85

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4 84 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE III) THIS PROJECT WILL BE INITIATED IN DEC 84, IN PHASE WITH THE FY83 PROJECT SCHEDULE.	700.0			JAN 86	JAN 86
T 82 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS LASER HEAT TREATING OF HARDWARE AND TESTING IS COMPLETE. END-OF-CONTRACT DEMONSTRATION WAS HELD ON 24 MAY 1984. A FINAL TECHNICAL REPORT IS BEING WRITTEN.	290.0	243.0	45.0	JAN 84	SEP 84
T 82 5064	LIGHT WEIGHT SADDLE TANK (PHASE III) TESTING FUNDED IN FY82 HAVE BEEN COMPLETED. TESTING CONTINUES WITH FY83 FUNDING.	85.0		85.0	SEP 83	SEP 84
4 83 5064	LIGHT WEIGHT SADDLE TANK (PHASE III) SIX TESTS HAVE NOW BEEN SATISFACTORILY COMPLETED. TWO MORE ARE REQUIRED AND SCHEDULED. A VERY COMPETITIVE QUOTE FOR THE NEW PLASTIC TANK HAS BEEN OBTAINED. FINAL REPORT ON ENGINEERING EVALUATION IS BEING PREPARED.	125.0		55.0	JUN 84	SEP 84
T 82 5067	PLASTIC BATTERY BOX PROJECT WAS HELD UP BY THE NEED TO DESIGN AND FABRICATE STEP PLATE FOR M809 VEHICLE BATTERY BOX. THIS MODIFICATION WILL ALLEVIATE SAFETY HAZARD WHICH AROSE DURING STRESS TESTING. UPON RECEIVING STEP PLATE IN LATE FY84, STRESS TESTING WILL CONTINUE.	125.0	5.3	113.0	DEC 82	FEB 85
4 83 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE III) THE PROJECT HAS BEEN ON HOLD WHILE THE CONTRACT IS BEING RENEGOTIATED. ADDITIONALLY THE PROJECT SITE HAS BEEN CHANGED FROM PRIVATE CONTRACT SITE AT MELBOURNE FLORIDA TO PATRICK AIR FORCE BASE, FL.	175.0	142.0		SEP 85	NOV 86
T 81 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T156 TRACK ARE BEING MANUFACTURED FOR SUBSEQUENT TEST. TESTING BEGUN AND WELL ADVANCED.	200.0	10.3	144.4	SEP 82	DEC 84
T 82 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) THE FORMULATION DEVELOPED IN THIS PROJECT HAS BEEN INCORPORATED INTO THE MIL-T-11891B SPECIFICATION AS A BASE LINE TO BE USED FOR LIFE CYCLE COST EVALUATION. ACCEPTANCE TESTING STILL REQUIRED FOR THE NEW SPECIFICATION.	200.0	52.0	103.0	SEP 83	DEC 84
4 83 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES INITIATED WRITING INTO SPECIFICATION PRIOR TO IMPLEMENTATION. THE PRESENT MANUFACTURE AND SUBSEQUENT TESTING OF THE GENERIC FORMULATION WILL CONCLUDE THIS PROGRAM. SPINOFFS FOR OTHER ELASTOMER APPLICATIONS WILL RESULT FROM THIS WORK.	145.0		118.8	JAN 86	DEC 84

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T 82 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THE SCOPE OF WORK WAS EXPANDED TO INCLUDE FMS FEASIBILITY STUDIES FOR TWO ADDITIONAL ARMY APPLICATIONS, CORPUS CHRISTI ARMY DEPOT AND GD LAND SYSTEMS. A CONTRACT IS BEING NEGOTIATED.	924.0	662.0	105.0	MAR 83	JUN 85
4 83 5082	FLEX MACHINING SYS (FMS) PILOT LINE F/TLV COMPS (CAM) (PH V) THIS PHASE OF THE FMS PROGRAM SUPPORTED IMPLEMENTATION. THE FMS HANDBOOK WAS UPDATED. A FMS SEMINAR WAS CONDUCTED. AN END OF CONTRACT PRESENTATION WAS HELD. FINAL REPORTS ARE BEING PREPARED.	350.0	350.0		OCT 84	OCT 84
T 79 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 TWENTY M2/M3 GEARS HAVE BEEN FORGED FROM POWDER METAL PREFORMS TO NEAR NET SHAPE. SIX HAVE BEEN SENT TO A COMMERICAL HEAT TREATER FOR HARDENING AND FINAL GRINDING. TRW IS CURRENTLY WRITING THE FINAL REPORT.	328.0	204.0	124.0	MAR 81	SEP 84
T 82 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 4 THE FUNDS FROM THIS PROJECT HAVE BEEN UTILIZED TO MONITOR PROJECT T795083.	30.0		27.0	SEP 83	SEP 84
4 83 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE V) THE DRAFT OF FTR IS IN PROGRESS. EXTENSION OF CONTRACT GRANTED DUE TO DIFFICULTY IN OBTAINING COST DATA. END OF CONTRACT BRIEFING HELD 19 SEP 84 AT TACOM.	123.0	69.0	25.0	SEP 84	SEP 84
4 83 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) TEST RUNS ARE BEING MADE WITH PLASMA CUTTING TORCH TO DETERMINE CURRENT AND SPEED SETTINGS. WELDING TEST ARE BEING CONDUCTED ON AS-CUT SURFACES TO DETERMINE QUALITY OF JOINTS. THE PLASMA TORCH REQUIRES MACHINE URDATING.	70.0		70.0	DEC 84	JAN 85
T 81 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES THE FINAL REPORT HAS BEEN DRAFTED. THE REAR SPRING ASSYS WILL BE REMOVED FROM STORAGE, MODIFIED THEN RETESTED. THE AVAILABILITY OF IN-HOUSE FUNDING AND ENCOURAGING TEST RESULTS ON A FRONT SPRING ASSY PROMPTS THIS ACTION.	158.0	143.0	15.0	JAN 83	SEP 84
T 82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES THE FRONT SPRING ASSYS WERE STRENGTHEN BY ADDING A SHORT STEEL LEAF TO THE BOTTOM. THIS CHANGE PROVIDED AN EVEN STRESS DISTRIBUTION. THE ASSY EXCEEDED THE SPECIFIED TEST OF 150,000 CYCLES AT 0.5 TO 2.5G DYNAMIC LOADING.	137.0	73.0	37.0	JUN 83	AUG 84
T 81 6028	PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT THE SOURCE OF FUNDING REQ FOR SOFTWARE IMPLEMENTATION OF THE ABSOLUTE COMPRESSION TEST HAS NOT BEEN DETERMINED. THE EQUIP EVAL AT RRAD HAS BEEN FUNDED BY O+MA AS A PIGGYBACK EFFORT TO AN INSPECT AND REPAIR BEING CONDUCTED BY TACOM MAINTENANCE.	60.0	47.8	12.2	JUL 82	DEC 84

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T 79 6038	HIGH DEPOSITION WELDING HIGH DENSITY WELDING AND BALLISTIC TESTING HAS BEEN COMPLETED. THE TESTS AT APG WERE PASSED SUCCESSFULLY. PLASMA MIG WELDING IS THE ONLY PHASE NOT COMPLETED. A BALLISTIC TURRET IS BEING FABRICATED IN PRODUCTION FIXTURES.	1,503.0	1,352.0	151.0	JUL 80	JAN 85
T 82 6038	HIGH DEPOSITION WELDING THE PROCEDURE FOR SUBMERGED ARC WELDING WITH METAL POWDER ADDITION WERE ACCEPTABLE ON ADDITIONAL TEST PLATES. WELDING OF NARROW GAP GROOVES IS ESTABLISHED AND PRODUCED ACCEPTABLE RESULTS. ALL PHASES EXCEPT FOR PLASMA MIG HAVE BEEN COMPLETED.	1,464.0	1,352.0	72.0	DEC 84	JAN 85
T 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION SOFTWARE CONVERSION OF THE COMPUTER SIMULATION MODEL FROM VAX FORMAT TO PRIME REMAINS A PROBLEM. ALL ATTEMPTS TO DATE HAVE FAILED. AN EFFORT WILL BE MADE TO SUBSTITUTE AN IBM SYSTEM FOR PRIME.	848.0	828.0	10.0	FEB 85	DEC 84
4 83 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION (PHASE II) SEE PROJECT NO T 82 6054 FOR STATUS.	100.0		100.0	DEC 85	DEC 84
T 82 6057	XM1 COMBAT VEHICLE TASK 04 GENERAL DYNAMICS COMPLETED PHASE I OF OXYFUEL CUTTING PROJECT AND INTENDS TO SUBMIT A PROPOSAL FOR THE PROTOTYPE EQUIP PHASE II. TASK 05 CONSISTED OF DATA + INFORMATION GATHERING. A CONCEPTUAL DESIGN FOR A DIAGNOSTIC SYS IS BEING PREPARED.	2,112.0	1,462.0	441.0	SEP 83	JUN 84
T 82 6057 05	MACHINE DIAGNOSTICS HISTORICAL + PROCEDURAL DATA ON INSPECTION + MACH TOOL MAINT, MACH TOOL PARAMETERS, + MONITORING OF TOOL WEAR + FAILURE HAS BEEN GATHERED. CONCEPTUAL DESIGN FOR A DIAGNOSTICS SYS IS BEING PREPARED.	1,355.0	1,105.0	152.0	SEP 83	DEC 84
T 82 6057 13	LASER CUTTING NINE LASER SOURCES SELECTED FOR EVAL TEST PLATES CUT IN 1/4, 1/2, 3/4 + 1 INCH THICK ARMOR STEEL. RECOMMENDATIONS FOR PROTOTYPE LASER EQUIPMENT ARE BEING DEVELOPED.	436.0	186.0	156.0	MAY 83	NOV 84
T 82 6057 17	MANUFACTURING METHODS FOR SPECIAL ARMORS AMMRC, AMCCOM, + PBM HAVE PROGRESSED IN THE AREA OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE. TECHNICAL DETAILS ARE CLASSIFIED.	3,000.0		15.0	JAN 85	JAN 85
4 83 6057	ABRAMS M1 COMBAT VEHICLE TASK 13 TEST PLATE WERE CUT THAT REPRESENTED STRAIGHT CUTS + HOLE PATTERNS (.375 + .675 DIA) FOR EVALUATION. A 4 MO EXTENSION OF THE CONTRACT WAS GRANTED. IF RECOMMENDATION ARE FAVORABLE THE PROJECT WILL CONTINUE TO PHASE II.	92.0		92.0	FEB 84	JUN 84

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4 83 6057 05	MACHINE DIAGNOSTICS SEE MMT T 82 6057-05.	55.0		55.0	FEB 84	DEC 84
4 83 6057 13	LASER CUTTING OF TRACKED COMBAT VEHICLE PARTS SEE MMT T 82 6057-13.	32.0		32.0	FEB 84	NOV 84
T 80 6059	LARGE CAST ALUMINUM COMPONENTS SEE SUBTASKS.	1,522.0	1,430.0	92.0	JUL 81	SEP 84
T 80 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS BFVS-PMO WOULD NOT SUPPORT IMPLEMENTATION OF THE CAST ALUMINUM TURRET BECAUSE INCREASED WEIGHT, LACK OF AGREEMENT OF SAVINGS, LACK OF CONFIDENCE THAT FOUNDRIES WOULD AGREE TO PRODUCE CASTINGS, + RISK INVOLVED IN QUALITY OF A LARGE CAST TURRET.	738.0	724.0	14.0		SEP 84
T 80 6059 03	ADHESIVE BONDING THIS PROJECT WAS COMPLETED. WORK IS CONTINUING IN PROJECT T 82 6059 TASK 03.	170.0	145.0	25.0		JUN 84
T 80 6059 06	LASER HEAT TREATING THE CONTRACT WORK FOR THIS FISCAL FUNDED YEAR HAS BEEN COMPLETED. THE WORK ON THIS TASK HAS BEEN COMPLETED.	257.0	230.0	27.0		JUN 84
T 80 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET PROTOTYPE TESTING HAS BEEN INITATED.	357.0	331.0	26.0		SEP 84
T 82 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASKS.	1,545.0	1,348.0	197.0	DEC 84	MAY 85
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS BFVS-PMO DID NOT CONCUR WITH ORSTA-RCK RECOMMENDED CONTINUATION OF THE CAST ALUMINUM TURRET PROGRAM. TACOM AGREED TO CONSIDER THE CONTINUATION OF THE PROGRAM BY REVISING THE SCOPE OF WORK TO ARMOR APPLIQUE TO IMPROVE TURRET BALLISTIC PROTECTION.	490.0	445.0	45.0	DEC 83	SEP 84
T 82 6059 02	SELF-THREADING FASTENERS LAB ANALYSIS OF SELECTED FASTENERS IS COMPLETE, AND IMPLEMENTATION HAS BEEN INITIATED. A COST ANALYSIS HAS BEEN COMPLETED AND WILL BE INCLUDED IN FINAL REPORT.	246.0	196.0	46.0	FEB 83	SEP 84
T 82 6059 03	ADHESIVE BONDING LABORATORY TESTING HAS BEEN COMPLETED AND PRODUCTION APPLICATION TECHNIQUES HAVE BEEN ESTABLISHED. PRODUCTION APPLICATIONS HAVE BEEN LISTED. AN ADHESIVELY BONDED AMMO RACK HAS BEEN INSTALLED IN VEHICLE 481 FOR A 6000 MILE TEST.	130.0	105.0	22.0		SEP 84

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T 82 6059 06	LASER HEAT TREATING LASER HEAT TREATING AND METALLURGICAL TESTING HAVE BEEN COMPLETED. SIMULATED FIELD TESTING IS COMPLETE AND ACTUAL FIELD TESTING IS COMPLETE. FINAL REPORT PREPARATION AND COST ANALYSIS HAS BEEN INITIATED.	130.0	107.0	20.0	SEP 84	DEC 84
T 82 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET A PROTOTYPE COMPOSITE TURRET BASKET IS BEING INSTALLED ON VEHICLE 481 FOR A 6000 MILE TEST.	131.0	107.0	20.0	JUN 83	SEP 84
T 82 6059 20	CARC APPLICATION PROCESSING TECH OPERATOR TRAINING IS COMPLETE. PAINT TESTING IS CONTINUING. ROBOTIC CAMOUFLAGE PATTERNS AND MAINTENANCE REQUIREMENTS ARE BEING ESTABLISHED. CARC PRIMER COATING HAS BEEN IMPLEMENTED INTO PRODUCTION. FINAL REPORT IS BEING WRITTEN.	418.0	368.0	44.0	DEC 84	MAR 85
4 83 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASKS.	805.0	689.0	62.0	APR 85	AUG 85
4 83 6059 13	METAL ARC SPRAYING A TEST PLAN HAS BEEN DEVELOPED AND TESTING HAS BEEN ITIATED. A REQUIREMENT SPECIFICATION HAS BEEN EVALUATED. LABORATORY ANALYSIS HAS BEEN COMPLETED AND RESULTS ARE BEING EVALUATED.	310.0	260.0	26.0	OCT 84	OCT 84
4 83 6059 17	PRE-PAINT CLEANING SYSTEM A REQUIREMENT SPECIFICATION HAS BEEN EVALUATED IN COOPERATION WITH THE NAVY. A TEST PLAN HAS BEEN DEVELOPED AND TESTING HAS BEEN INITIATED. LABORATORY ANALYSIS HAS BEEN COMPLETED AND RESULTS ARE BEING EVALUATED.	325.0	275.0	24.0	OCT 84	OCT 84
4 83 6059 19	SQUEEZE CAST ROAD WHEELS MANUFACTURING COST OF SQUEEZE CASTING THE TURRET HATCH HAVE BEEN DEFINED. TEST PLATES HAVE BEEN SQUEEZE CAST FOR BALLISTIC TESTING.	170.0	154.0	12.0	APR 85	AUG 85
T 81 6076	AUTOMATED DEPOT INSPECTION OF ROADWHEELS THE NDT DATA IS BEING STATISTICALLY COMPARED SO THAT CORRELATION MAY BE ESTABLISHED. DATA HAS BEEN COLLECTED FOR OVER 800 ROADWHEELS.	285.0	225.0	22.0	SEP 83	MAY 85
4 84 6077	SEALED LEAD ACID STORAGE BATTERY DESIGN AND PERFORMANCE CRITERIA HAVE BEEN ESTABLISHED. A SEALED BATTERY PERFORMANCE DOCUMENT HAS BEEN PREPARED WITH TEST PROCEDURES AND REQUIREMENTS ESTABLISHED.	50.0		14.0	AUG 84	AUG 84

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T 82 6079	AGT-1500 ENGINE SEE SUBTASKS.	1,360.0	1,066.0	268.0	MAR 85	AUG 84
T 82 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES MONOCRYSTAL ALLOY SC102-1 CASTING QUALITY ANALYSIS HAS BEEN COMPLETED AND THE EFFECT OF LOW ANGLE BOUNDARIES, SURFACE FRECKLES + POROSITY HAVE BEEN ASCERTAINED. THE INTEGRITY OF BLADE APPL WAS VERIFIED THROUGH STRESS ANALYSIS + MECHANICAL TEST.	400.0	300.0	74.0	SEP 83	AUG 84
T 82 6079 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY FINAL STATUS REPORT FOR FY82 PROJECT (PHASE I). PHASE I REPORT WAS COMPLETED AND DISTRIBUTED TO VARIOUS GOVERNMENT AGENCIES.	450.0	350.0	100.0	SEP 83	JUN 84
T 82 6079 03	BI-CAST HIGH PRESSURE TURBINE NOZZLE DESIGN ANALYSIS DETERMINED THE BEST CONFIGURATION THAT RESULTED IN LOWER VANE STRESS + IMPROVED COOLING PATH WITHIN THE VANES. MECHANICAL PROPERTY TESTING INDICATED THAT SC102-1 VANE AND MAR-M-509 SHROUDS EXHIBITED GOOD REPAIRABILITY BY WELDING.	510.0	416.0	94.0	OCT 83	MAY 84
4 83 6079	AGT-1500 ENGINE SEE SUBTASKS.	1,534.0	1,442.0	92.0	OCT 85	OCT 84
4 83 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES MONOCRYSTAL APPLICATION ANALYSIS HAS BEEN COMPLETED. PRELIMINARY BLADE DEMONSTRATION HAS BEEN INITIATED. A INITIAL ORDER OF 50 BLADES FROM TRW WILL BE EVALUATED BY AVCO LYCOMING BY NDE TECHNIQUES + 30 BLADES WILL BE SELECTED FOR FINISH MACHINING.	231.0	208.0	23.0		OCT 85
4 83 6079 02	RAPIDLY SOLIDFIED RATE (RSR) NICKEL-BASE SUPERALLOY UNDER COMPONENT QUALIFICATION, COMPONENT INSPECTION AND EVALUATION HAS BEEN COMPLETED.	363.0	340.0	23.0		JUN 85
4 83 6079 03	BI-CAST HIGH PRESSURE TURBINE NOZZLE TOOLING AND GAGING FOR THE BICAST NOZZLE IS READY. CASTING PARAMETERS SUCH AS PNURING TEMP, MOLD TEMP AND THE EFFECT ON CASTABILITY AND DEFECTS ARE BEING INVESTIGATED.	498.0	475.0	23.0		AUG 85
4 83 6079 05	AUTOMATIC DEBURRING OF ENGINE COMPONENTS AVCO LYCOMING HAS SELECTED A ROBOT TO MEET THE DEBURRING REQUIREMENTS OF THE AGT-1500 ENGINE, AND IS CURRENTLY IN THE PROCESS OF INSTALLING THE ROBOTIC SYSTEM.	442.0	419.0	23.0		MAY 85
T 81 6089	ABRAMS TANK PLANT - TECH MOD PROGRAM THE 'AS IS' FACTORY ANALYSIS IS COMPLETE. THE 'TO BE' ANALYSIS IS NEARLY COMPLETE. AT END OF CONTRACT PRESENTATION IS SCHEDULED FOR MID DECEMBER 1984. PHASE II IS ON HOLD UNTIL A IMIP PULICY IS ESTABLISHED.	4,115.0	4,000.0	100.0	SEP 83	DEC 84

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T 82 6090	TOOELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE D+F WAS SIGNED ON 03/20/84. PRE-BID CONFERENCE WAS HELD IN MAY 1984. BIDS WERE OPENED ON 5 JUNE 1984 AND THE TEAD EVALUATION TEAM COMPLETED THEIR EVALUATION OF THE PROPOSALS ON 26 JUNE 1984.	100.0		11.0	MAY 83	SEP 85
4 84 6090	TOOELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM (PH II) TOOELE ARMY DEPOT HELD A PRE-BID CONFERENCE ON 8-9 MAY 1984 FOR CONTRACTOR REPRESENTATIVES. THE BIDS WERE OPENED ON 5 JUNE 1984, AND THE TEAD EVALUATION TEAM FINISHED THEIR EVALUATION ON 26 JUNE 1984. PLANNED CONTRACT AWARD DATE IS 20 SEPTEMBER 1984.	2,500.0		63.0	SEP 85	SEP 85
4 83 6095	ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS (PHASE I) TASK 1 AWARDED 19 JUN 84. ENG EFFORT JUST STARTED. TASK 2 AWARDED 29 SEP 83. EFFORT TO DATE HAS BEEN CAD MODELLING OF COIL DESIGN FOR TEN CANDIDATE GEARS. COILS, TOOLING AND TEST GEARS HAVE BEEN PROCURED. TRIAL HARDENING UNDERWAY.	304.0	286.0	18.0	DEC 84	JAN 86
4 83 6095 03	SURFACE TREATMENT AND CAST HARDENING OF STEEL COMPONENTS EFFORT TO DATE HAS BEEN CAD GEOMETRIC MODELLING OF COIL DESIGN FOR TEN CANDIDATE GEARS. COILS, TOOLING AND TEST GEARS HAVE BEEN PROCURED. TRIAL HARDENING IS UNDERWAY.	150.0	132.0	18.0	SEP 84	JAN 85
4 83 6095 05	SKIVE HOBBING CONTRACT AWARDED AND ENGINEERING EFFORT ONLY RECENTLY BEGUN.	174.0	154.0			JAN 86
T 81 6098	PRODUCTION OF SPECIAL ARMOR STEEL THE CONTRACTOR HAS DEMONSTRATED THAT COMMERCIAL EQUIPMENT CAN PRODUCE THE DESIRED MATERIAL. THE PROBLEM WITH PLATE FLATNESS REQUIRES SOME PROCEDURE MODIFICATION BY THE CONTRACTOR. PLATES ARE SCHEDULED FOR COMPLETION OF ROLLING NOV 84.	900.0	447.0	450.0	NOV 83	JAN 85
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMMRC, AMCCOM, + PEM HAVE PROGRESSED IN THE AREA OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE. TECHNICAL DETAILS ARE CLASSIFIED.	6,550.0		5,265.0	JUL 84	JAN 85
4 83 6107	IMPROVED MBT TRACK WORK IS CONTINUING ON SUBTASKS 1 AND 2. SUBTASK 2 WORK WAS COMPLETED. SEE SUBTASKS FOR DETAILED WORK STATUS.	735.0	637.0	100.0	AUG 84	DEC 84
4 83 6107 01	COMP MFG FRM HI STR/LTWEIGHT FERROUS, NON-FERR + MTL MATRIX METAL MATRIX COMPOSITE TUBES WERE FABRICATED, BUT PROBLEMS RESULTED WHEN THEY WERE INSERTED INTO STEEL SLEEVES. THIS HAS RESULTED IN SCHEDULE SLIPPAGE AND A NEED FOR MORE FUNDING. THE EFFORT TO FABRICATE SIC AL TRACK PINS IS ON SCHEDULE.	304.0	271.0	33.3	JUN 84	DEC 84

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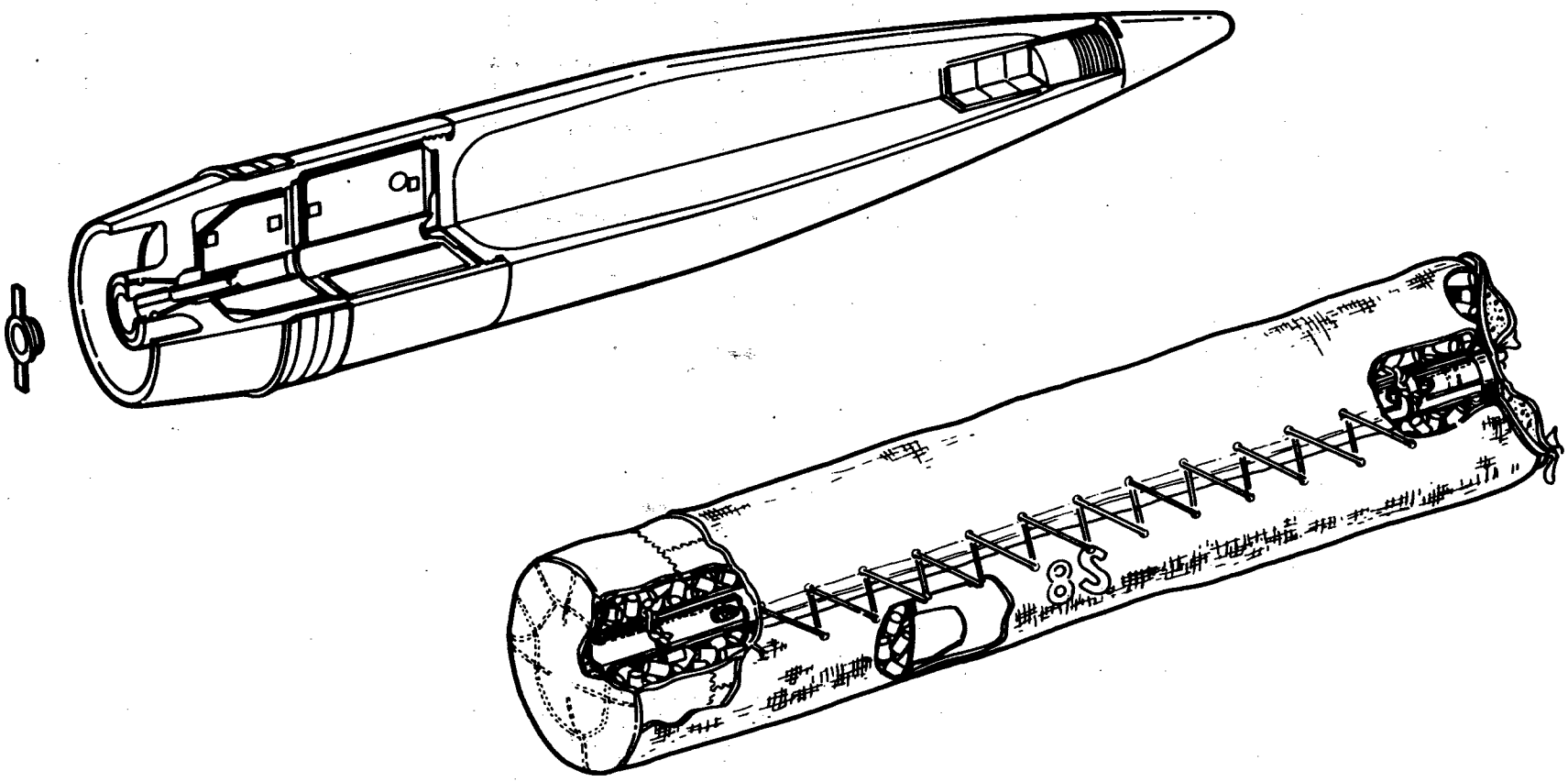
4 83 6107 02	ADAPTIVE FLUIDIC DAMPER THE WORK ON THIS TASK IS COMPLETE WITH THE EXCEPTION OF THE FINAL TECHNICAL REPORT. THE FINAL REPORT WILL BE INCLUDED WITH THE NEXT SEMI-ANNUAL SUBMISSION.	90.0	57.0	33.0	MAR 84	DEC 84
4 83 6107 03	ORGANIC COMPOSITE ROAD WHEEL A STRESS ANALYSIS COMPARISON OF A CURRENT ALUMINUM ROAD WHEEL AND COMPOSITE ROADWHEEL DESIGN HAS BEEN COMPLETED. A HIGH SPEED POLAR WINDING MACHINE HAS BEEN INSTALLED AND TESTED.	343.0	309.0	34.0	AUG 84	NOV 84
4 83 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE PERFORMANCE VERIFICATION HAS BEEN COMPLETED. THE SUBSYSTEM MECHANICAL INTERFACE HAS BEEN FINALIZED. THE SYSTEM VERIFICATION IS IN-PROCESS.	750.0	724.0	13.0	DEC 85	DEC 84



ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
(AMCCOM)
(AMMUNITION)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84
84/10/15.

PROJECT NO	SUBTASK	TITLE	COST
5 83 0900		AUTOMATED MULTIPLE FILTER LIFE TESTER	343
5 82 0904		CHEMICAL REMOTE SENSING SYSTEMS	300
5 84 0904		CHEMICAL REMOTE SENSING SYSTEMS	1910
5 82 0905		MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE	261
5 82 0909		AUTOMATED AGENT PERMEATION TESTER	221
5 82 0913		SPIN COATING OF DECON AGENT CONTAINERS	255
5 83 0913		SPIN COATING OF DECON AGENT CONTAINERS	90
5 84 0913		COATING OF DECON AGENT CONTAINERS	124
5 84 0918		MODERNIZATION OF FILTER PENETRATION EQUIPMENT	300
5 83 0924		MANUFACTURING PROCESS FOR GAS MASK CANISTERS	283
5 84 0924		MANUFACTURING PROCESS FOR GAS MASK CANISTERS	800
5 83 0925		PROTECTIVE MASK LEAKAGE TESTING	199
5 84 0925		PROTECTIVE MASK LEAKAGE TESTING	600
*5 84 0926		MMT FOR XM22 CHEMICAL AGENT ALARM SYSTEM	700
5 81 1001		PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES	606
5 82 1019		MMT PENTABORANE PROCESS ENGINEERING	334
5 83 1295		MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT	218
5 84 1295		MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT	600
5 79 1318		CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ	398
5 80 1318		PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB	484
5 81 1318		PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB	221
5 80 1348		SUPER TROPICAL BLEACH	202
5 81 1348		SUPER TROPICAL BLEACH	822
5 83 1348		SUPER TROPICAL BLEACH	340
*5 84 1348		SUPER TROPICAL BLEACH	389
5 82 1600		THREE PIECE SHAFT FOR THE SUU-65/B TAILCONE	250
5 84 1802		AUTOMATED OPTICAL MICROELECTRONICS INSPECTION	496
5 84 1803		IMPROVED LEAD DIOXIDE ELECTROPLATING TECHNOLOGY	346
5 81 1907		AUTOMATED GAGING FOR MEDIUM CAL. PROJECTILE BODIES (CAM)	621
5 84 1914		PROCESS ENGINEERING FOR EAK EXPLOSIVES	495
5 81 3961		IMPRVD VIBR ACCEPTANCE TESTING F/M732,XM587/724 FUZES ? S?A	690
5 79 4000		AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT	1750
5 81 4000		AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT	404
5 79 4024		DSN DEV BLD PROT COMP AND AUTO ASSY MACH M223 FUZE	1965
5 83 4061		NITROGUANIDINE PROCESS OPTIMIZATION	640
5 82 4062		AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS	4737
	01	SLURRY VACUUM FORMING MFG SYS	
	02	PAPER MOLDING MANUFACTURING SYSTEM	
	03	ASSEMBLY SYSTEM	
	06	PROTOTYPE PRODUCTION TOOLING	
5 83 4062		AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS	250
5 84 4078		UPGRADE SAFETY, READINESS + PROD OF EXISTING MELT POUR LINES	621
5 82 4145		CONTROL DRYING AUTO SB + BALL PROPELLANT MANUFACTURING	479
	01	CONTROL DRYING AUTO SB PROP MFG	
	02	CONTROL DRYING AUTO BALL PROP MFG	
5 80 4150		NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION	489
5 81 4150		NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS	211
5 82 4161		PRODUCTION TECHNIQUES FOR IMPROVED SMOKE MUNITION (81 MM)	516
5 82 4200		TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS	365
5 84 4200		TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS	570
5 80 4210		DRY CUTTING OF ENERGETIC MATERIALS	622
5 81 4226		ON-LINE MONITORS FOR WATER POLLUTANTS	433
5 81 4231		IN-PLANT REUSE OF POLLUTION ABATED WATERS	447
5 82 4231		IN-PLANT REUSE OF POLLUTION ABATED WATERS	313
5 81 4266		MANUF, INSPECT + TEST EQUIP FOR MAGNETIC POWER SUPPLY	788
5 81 4267		CONTINUOUS PROCESS FOR GRANULAR COMP B	194

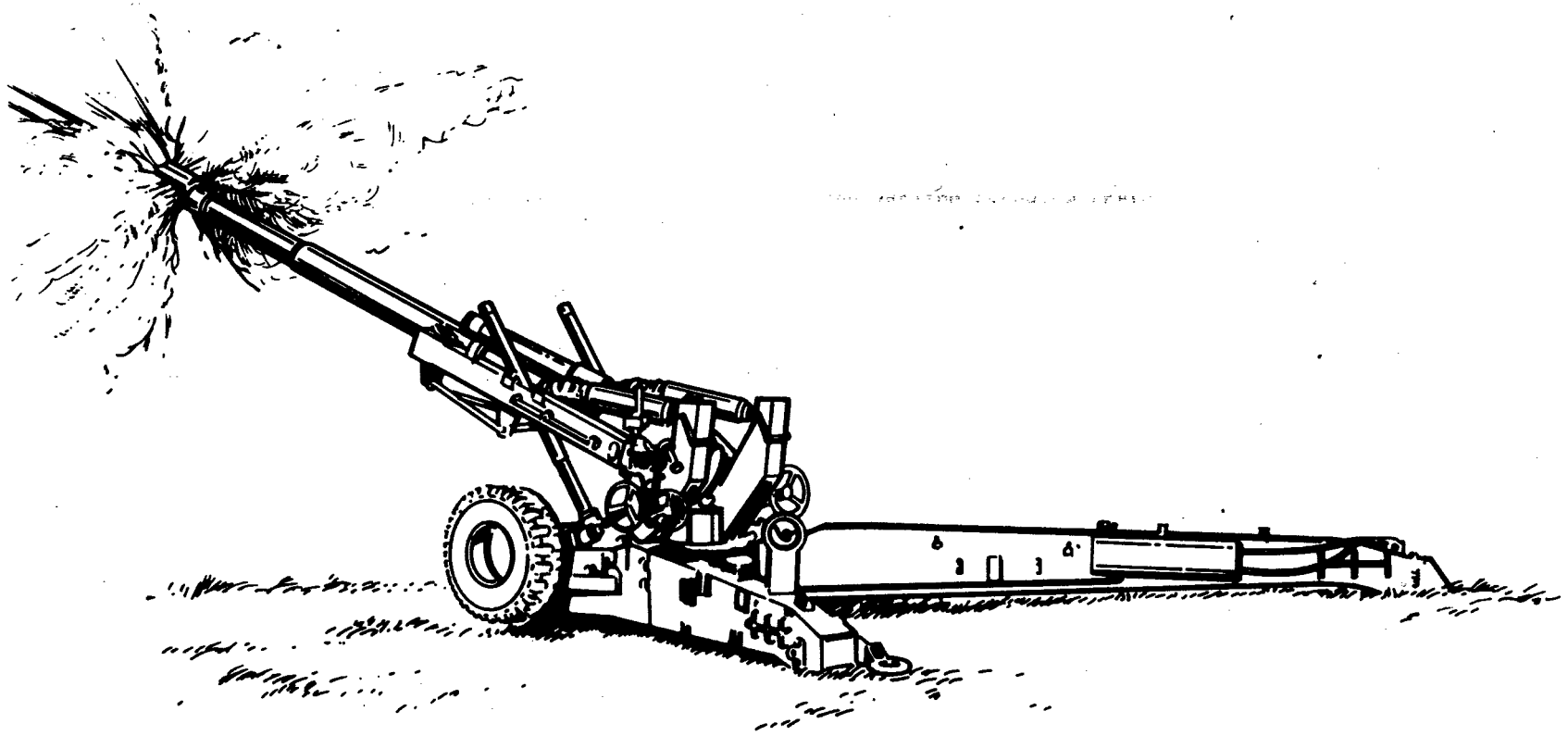
5 82 4489		ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES	1320
	01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES	
	02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER)	
	03	TERTIARY TREATMENT OF HOLSTON WASTEWATER	
	05	ADVANCED AIR EMISSIONS ABATEMENT	
5 83 4489		ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES	86
	03	TERTIARY TREATMENT OF HOLSTON WASTEWATER	
5 84 4489		ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES	917
5 81 4503		NEW PROCESS FOR SAWS TRACER AMMUNITION	496
5 82 4503		NEW PROCESS FOR SAWS TRACER AMMUNITION	209
5 81 4506		5.56 MM CARTRIDGE LINKING SYSTEM	572
5 82 4506		5.56MM CARTRIDGE LINKING SYSTEM	573
5 80 4508		PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS	651
5 82 4508		PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS	603
5 84 4510		AUTO ASSY OF ADDITIVE LINER TO TANK CTG	295
5 82 4511		DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS	302
5 83 4511		DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS	420
5 84 4511		DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS	164
5 84 4520		PRESS LOADING PROJECTILE 105MM HEAT-MP-T, XM815	589
5 84 4523		RAPID MOISTURE ANALYSIS OF EXPLOSIVE MIXES	200
5 84 4524		AUTOMATED MELT POUR EQUIPMENT FOR SMALL AP MINES	385
5 82 4529		MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES	524
5 83 4533		LOVA PROPELLANT PROCESSING	398
5 82 4534		XM855 BULLET CONVERSION OF SCAMP EQUIPMENT	402
5 83 4534		SAWS BULLET CONVERSION OF SCAMP EQUIPMENT	812
5 84 4534		M855 BULLET CONVERSION OF SCAMP EQUIPMENT	1792
5 83 4538		5.56 SAWS LINK ORIENTER AND FEED SYSTEM	441
5 84 4539		AUTOMATED CARTRIDGE CASE HARDNESS MEASUREMENT AND CONTROL	182
5 83 4540		CACO3 COATING OF 7.62MM BALL PROPELLANT	115
5 84 4540		CACO3 COATING OF 7.62MM BALL PROPELLANT	322
5 84 4541		HIGH SPEED INSPECTION OF SAA PRIMED CASES	499
5 84 4544		THIRD GENERATION DYNAGUN (GAMMA) TO SIMULATE TANK GUNS	416
5 83 4547		PROC TECH FOR XM76 IR SCREENING GREN * XM49 SMOKE GENERATOR	319
5 84 4547		PROCESS TECHNOLOGY FOR XM76 IR SCREENING GRENADE	301
5 83 4548		PYRO SAFETY ENHANCEMENT	1197
	01	MIXER SAFETY ENHANCEMENT	
	02	TRANSPORT AND CONVEYING SAFETY ENHANCEMENT	
	03	QUENCHING SAFETY ENHANCEMENT	
	04	BAY DESIGN SAFETY ENHANCEMENT	
5 84 4548		PYRO SAFETY ENHANCEMENT	347
5 84 4550		AUTOMATED ASSEMBLY OF M22 FLASH SIMULATOR	465
5 82 4551		MANUFACTURING PROCESS PARAMETER FOR XM855/856 AMMO	619
5 81 4555		INFRARED MONITORING OF PYROTECHNIC BLENDING	250
5 84 4556		ON-LINE MONITORS F/WATER POLLUTANTS GENERATED BY MFR OF EXPL	458
5 82 4557		ARBAT	2973
5 82 4560		MOD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES	142
5 82 4563		XM803 METAL PARTS PRODUCTIVITY	750
	01	IMPROVED STRAIGHTNESS OF DU PENETRATOR BLANKS	
	02	SALT BATH SOLUTION HEAT TREAT FOR DU PENETRATORS	
	03	OPTIMIZATION OF AGE HARDENING IN DU PENETRATORS	
	04	HEAT TRANSFER AND RESIDUAL STRESS	
	05	REDUCTION OF CHIPS OXIDATION	
5 83 4563		PROCESS INPROVEMENT FOR TANK DU PENETRATORS	2730
	04	HEAT TRANSFER AND RESIDUAL STRESSES	
	05	REDUCTION OF CHIP OXIDATION	
	06	RECYCLING OF STABALLOY MACHINING CHIPS	
	07	FORMING TO NEAR NET SHAPE	
	08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE	
	11	PROCESS IMPROVE FOR DU PENETRATORS-MG F2 LINERS	
	16	QUENCH PARAMETERS FOR HEAT TREATING DU	
	20	IMPROVED DU REDUCTION PROCESSING	
5 84 4563		PROCESS IMPROVEMENT FOR TANK DU PENETRATORS	2350
5 84 4570		IMPR MFS PRO TES PROC F/XM762 ARTY ELECT TIME FUZE	387
5 84 4574		IMPROVED PRECESS FOR RDX/HMX FINES MANUFACTURE	150
5 84 4578		MODIFICATION * IMPROVEMENT OF DMSO PILOT PROCESS FOR RDX/HMX	430
5 84 4579		WHITE WATER RECOVERY SYS F/COMBUSTIBLE CASE MANUFACTURING	500
5 83 4580		UV-CURE PAINT FOR LARGE CALIBER PROJECTILES	80

5	83	4583	MANUFACTURE OF STEEL FOLDING FINS 126
5	84	4597	MFG PROC F/CANNON CALIBER DU PENETRATOR (20MM, 25MM, 30MM) 374
5	83	4605	PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY 570
5	84	4606	AUTOMATED ASSEMBLY OF BLU 97/B COMBINED EFFECTS MUNITION 1418
5	84	4626	AUTOMATED ASSEMBLY OF MILLIMETER WAVE TRANSDUCERS 180
5	84	4657	BINARY FACILITY MONITORING AND DETECTION 290
5	83	4663	REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER 136
*5	84	4663	REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER 50
*5	84	4664	RADIOLOGICAL INSPECTION OF AMMUNITION FOR THE SGT YORK 91
5	84	4665	COMPUTER SIMULATION OF DU QUENCHING 400
5	84	4667	CONTINUOUS RECOVERY AND PURIFICATION OF MDU SCRAP 255
5	84	4668	ELECTROSTATIC PRECIP IMPROVEMENTS (SMOG HOG) 180
5	84	4773	120MM COMBUSTIBLE CASE BODY REMOVAL SYSTEM 200
5	82	6599	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY 74
5	79	6693	BALL PROPELLANT DETERRENT COATING-CAM RELATED 171
5	81	6716	DEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS 177

***These projects were just funded and do not require a status report for this period.**

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 80 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY DURING THIS PERIOD, CONTRACT INSTALLATION OF PILOT EQUIPMENT AT THE CENTRAL WASTE TREATMENT PLANT (CWTP) WAS COMPLETED AND DEBUGGING WAS INITIATED.	156.0	4.0	116.1	DEC 80	SEP 84
5 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS CONTRACT FOR INSTALLATION OF PILOT DEWATERING EQUIPMENT AT THE PBA CENTRAL WASTE TREATMENT PLANT (CWTP) WAS COMPLETED. SLUDGE PRODUCED HERE MUST BE DISPOSED OF IN A PERMITTED HAZARDOUS WASTE LANDFILL. EQUIPMENT DEBUGGING WAS INITIATED ALSO.	110.0	44.3	52.5	SEP 83	SEP 84
5 81 1500	EVAL INDUST CAPABILITY E/LOAD COMMERCIAL EXPL-HIGH USE MUNIT EDITING AND REVIEW OF FINAL REPORT STILL UNDERWAY AT ARDC. CLOSE OUT ACTION NOT YET COMPLETE ON IRECO CONTRACT.	543.0	294.0	248.0	SEP 82	SEP 84
5 82 1500	EVAL INDUST CAPABILITY E/LOAD COMMERCIAL EXPL-HIGH USE MUNIT EDITING AND REVIEW OF FINAL REPORT STILL UNDERWAY AT ARDC. CLOSE OUT ACTION NOT YET COMPLETE ON IRECO CONTRACT.	450.0		302.0	OCT 83	SEP 84
5 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS ARCHITECTURAL ENGINEERING FIRM COMPLETED AN INITIAL STUDY AND SUBMITTED A REPORT ON NEW MATERIAL HANDLING SYSTEMS. INFORMATION USED TO DETERMINE LAYOUT AND EQUIPMENT FOR CURRENT AND PROPOSED PRODUCTION FACILITIES.	221.0	91.2	111.8	SEP 85	SEP 85
5 83 1701	BULK TRANSFER OF CHEMICAL MATERIALS CONTINUED WORK ON PROCUREMENT AND INSTALLATION OF EQUIPMENT FOR EVALUATION OF TRANSPORTAINERS AND IN-LINE MIXERS FOR MATERIAL HANDLING. HAZARDS ANALYSIS WAS PERFORMED ON THE PROPOSED INTEGRAL SMOKE COMPLEX.	207.0	11.2	40.5	SEP 85	SEP 85
5 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES ISSUED CONTRACT FOR INSTALLATION OF JAYGO MIXER AND ASSOCIATED EQUIPMENT.	500.0	113.5	253.7	JUL 84	SEP 85
5 83 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES RECEIVED MATERIALS FROM CAAA, LSAAP AND LHAAP FOR MIXING STUDIES AT NSTL, MS. INITIATED TESTS AT NSTL FOR SAFETY CERTIFICATION OF JAYGO MIXER.	446.0	278.1	160.2	JUL 84	SEP 85
5 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS DURING THE PERIOD INSTALLATION PACKAGE AND BIDS WERE RECEIVED. PREPARATION OF INSTALLATION DRAWINGS FOR 10 LB/DAY OZONATION UNIT FOR RP WASTE TREATMENT EVALUATION BEGUN. DELAYED FUNDING HAS CAUSED EXTENSION OF PROJECT.	125.0	28.3	49.5	OCT 83	SEP 85



ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
(AMCCOM)
(WEAPONS)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84
84/10/15.

PROJECT NO	SUBTASK	TITLE	COST
6 76 7580		PILOT AUTOMATED SHOP LOADING AND CONTROL SYSTEM- CAM	329
6 81 7724		GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM)	180
6 83 7724		GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM)	250
6 80 7730		MANUFACTURE OF SPLIT RING BREECH SEALS	363
6 82 7730		MANUFACTURE OF SPLIT RING BREECH SEALS	108
6 81 7925		BORE EVACUATOR BORING	248
6 82 7926		HOT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS	295
6 81 7927		GENERATION OF BASE MACHINING SURFACES	423
6 81 7928		ROBOTIZED BENCHING OPERATIONS (CAM)	287
6 81 7985	02	BARREL BROACHING	471
	03	HIGH SPEED MACHINING	
6 82 7985	01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING	494
	03	SMALL ARMS WEAPONS NEW PROCESS TECH-HS MACHINING	
6 84 7985	01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING	728
6 80 8024		HIGH SPEED ABRASIVE BELT GRINDING	324
6 82 8024		HIGH SPEED ABRASIVE BELT GRINDING	142
6 80 8047		PASS THRU STEADY RESTS FOR TUBE TURNING	369
6 82 8050		RECYCLING SPENT GUN TUBES BY ESR MELTING	144
6 80 8057		DUAL RIFLING BROACH REMOVAL SYSTEM	215
6 82 8062		RAPID INTERNAL THREADING	366
6 82 8102		POWDER METALLURGY FORGINGS WEAPONS COMPONENTS	110
6 83 8102		APPL OF POWDER METALLURGY FORGING TO WEAPON COMPONENTS	142
6 82 8103		HIGH VELOCITY MACHINING	37
6 83 8103		HIGH VELOCITY MACHINING	285
6 84 8103		HIGH VELOCITY MACHINING	160
6 81 8105		ESTABLISH ROUGH THREAD BLANKS, 8 IN M201 BUSHING	292
6 82 8106		LARGE CALIBER POWDER CHAMBER BORING	72
6 80 8107		CREEP FEED CRUSH FORM GRINDING	579
6 81 8107		CREEP FEED CRUSH FORM GRINDING	73
6 83 8120		ADAPTIVE CONTROL TECHNOLOGY (CAM)	495
6 82 8151		PORTABLE ENGRAVING SYSTEM	171
6 84 8153		INCREASING GUN TUBE HEAT TREATMENT CAPACITY	250
6 81 8154		COMPUTER INTEGRATED MANUFACTURING (CIM),DDNC	442
6 83 8154		COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNON	650
6 84 8154		COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNONS	450
6 82 8238		BORING BREECH RING LUGS	203
6 82 8241		COMPUTER DIAGNOSTICS AND CONTROL FOR BORE GUIDANCE	308
6 84 8241		COMPUTER DIAGNOSTICS + CONTROL APPL TO BORE GUIDANCE (CAM)	85
6 82 8242		DUAL PRESS STRAIGHTENING OF GUN TUBES	120
6 82 8243		COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS	301
6 83 8243		COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS	260
6 82 8244		OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES	350
6 82 8245		APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE	206
6 83 8245		APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE	195
6 82 8246		GAS CHECK SEAT FINISHING	153
6 82 8252		INDUCTION HEATING OF A VARYING DIAMETER PREFORM	301
6 82 8253		MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS	250
6 82 8254		AUTOMATED SURFACE COATING OF CANNON - PAINTING	80
6 82 8259		IMPROVED MANUFACTURING PROCESS FOR FIRE CONTROL REGISTERS	261
6 82 8341		HOLLOW CYLINDER CUT OFF MACHINE	535
6 82 8346		DEBURRING OF BORE EVACUATOR HOLES	224
6 83 8351		IMP MANUFACTURE OF QUADRANT FLATS AND MUZZLE BRAKE KEYWAY	88
6 83 8352		SKIVING (METAL SHAVING) GUN TUBE BORES	120
6 83 8354		CUTTING OF HOT ROTARY FORGE TUBES	414
6 84 8426		APPLICATION OF LASERS TO CANNON MANUFACTURE	622
6 84 8430		AUTOMATED WELDING OF ROTARY FORGE HAMMERS	137
6 84 8431		AUTOMATED WELDING OF BORE EVACUATORS	215

6 84 8433	IN PROCESS CONTRUL OF SELAS HEAT TREAT SYSTEM (CAM)	125
6 84 8434	EDDY CURRENT INSPECTION OF GUN TUBES	118
6 84 8436	QUENCH CYCLE PROFILE MEASUREMENT SYSTEM	148
6 84 8437	DENSIFICATION OF WEAPON CASTINGS (HIP)	108
6 84 8439	IMPROVED RIFLING PROCEDURES	80
6 82 8448	BRAIDED PROCESS FOR BORE EVACUATOR	313
6 84 8473	APPL FUSED SALT PROCESS TO COAT TANTALUM ON L CAL LINERS	245
6 84 8474	APPL OF PARTIAL REFRACTORY LINERS TO CANNON TUBES	389

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING TESTS HAVE BEEN PERFORMED ON A CONSISTENT BASIS AND FORMS DESIGNED FOR RECORDING DATA. A COMPUTER PROGRAM WILL BE USED TO CALCULATE AND ANALYSIS DATA AND PROVIDE STATISTICAL INFORMATION AND CORRELATIONS.	127.0	22.0	105.0	MAR 80	DEC 84
6 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING CURRENT PRODUCTION IS BEING MONITORED. SOME PROBLEMS STILL EXIST SUCH AS POROSITY AND HOT TEARS. ACTION WILL BE TAKEN TO RESOLVE THE PROBLEMS.	252.8		248.8	FEB 82	DEC 84
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING METHODS WERE ESTABLISHED FOR CALCULATING CUTTING PARAMETERS. AREAS OF EMPHASIS INCLUDED TRACING THE CHIP BREAKER PROFILE, DETERMINING TRUE EFFECTIVE CUTTING RAKE ANGLE, MODIFYING THE MACHINABILITY FORMULA.	135.0	63.2	71.7	SEP 83	DEC 84
6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS PROJECT RESULTS HAVE BEEN REVIEWED WITH VARIOUS RIA QUALITY IMPROVEMENT TEAMS. GUIDELINES DEVELOPED HAVE BEEN APPLIED IN THE PROCUREMENT OF FOUR ADDITIONAL MILLING MACHINES. REVISIONS TO THE FINAL TECHNICAL REPORT ARE ONGOING.	287.6	267.5	19.1	JUN 81	JAN 85
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) A BOSTOMATIC #312 CNC MACHINING CTR WAS PURCHASED AND INSTALLED. A TECH PAPER WAS PRESENTED AT THE DOD MFG TECH CONFER. AND A OPTICAL FAB. AND TESTING WORKSHOP. A CONTRACT EXTENSION AND ADD. FUNDS REQUESTED. A COST GROWTH REQUEST WAS SUBMITTED.	126.0	109.0	15.0	JUL 83	JUN 85
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) THIS PROJECT IS COMPLETE. THE FINAL REPORT IS BEING PREPARED. THE CLASSIFICATION SYSTEM DEVELOPED UNDER THIS PROJECT WILL SUPPORT A CAPP SYSTEM BEING DEVELOPED UNDER A SEPARATE MMT PROJECT.	139.5	97.4	42.1	MAY 82	DEC 84
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES CAPP SOFTWARE WAS WRITTEN AND INSTALLED. MANUFACTURING ESTIMATING SOFTWARE IS BEING INSTALLED. THE GROUP SCHEDULING SOFTWARE WAS UPGRADED.	348.5	21.8	300.0	DEC 81	JUN 85
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	484.0	313.0	171.0	OCT 82	JUL 84
6 81 7985 04	SMALL ARMS WEAPONS NEW TECH-RAPID FLOW PLATING EVALUATION OF PLATING PROCESSES WAS COMPLETED. A FINAL TECHNICAL WILL BE SUBMITTED DURING THE NEXT REPORTING PERIOD.				JUL 84	JUL 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	620.0	316.0	134.0	OCT 83	OCT 84
6 82 7985 05	RECYCLE OF GUN STEEL SEE STATUS FOR 6837985-05.				JAN 85	JAN 65
6 83 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	530.0	355.0	140.0	OCT 84	OCT 84
6 83 7985 01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING THE HOT ROTARY FORGE AT MAREMONT IS NOT YET EQUIPPED WITH GFM CORP MANDREL CAPACITY. THEREFORE MANDREL STUDIES ARE BEING CONDUCTED ON A MAKE-SHIFT SYSTEM. THE PURPOSE OF THIS STUDY IS TO DETERMINE HEAT TRANSFER TO A NUMBER OF SUPERALLOY MANDRELS.				OCT 86	OCT 86
6 83 7985 05	RECYCLE OF GUN STEEL RECYCLING OF ARTILLERY TUBES FOR SMALL CALIBER GUN TUBES HAS BEEN SUCCESSFUL WITH NO ADVERSE INDICATIONS. THE FEASIBILITY OF USING THIS MATERIAL FOR SMALL ARMS HAS BEEN PROVEN IN ALL RESPECTS EXCEPT EROSION LIFE TESTING.				JAN 85	JAN 85
6 83 7985 06	TRAVELING ELECTRODE ECM RIFLING SEE MMT 6 84 7985-06.					JAN 85
6 84 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	728.0	524.0	20.0	OCT 85	OCT 85
6 84 7985 04	RAPID FLOW PLATING OF GUN TUBES PLATING PARAMETERS FOR THE 20MM M61 BARREL WILL BE DEVELOPED. CONTRACT AWARD IS EXPECTED SOON.				OCT 86	OCT 86
6 84 7985 06	TRAVELING ELECTRODE ECM RIFLING TEST PLAN DEVELOPED TO TEST RIFLING OF STELLITE LINERS, ECM BORE PREPARATION, ECM CHAMBERING, AND IMPROVED CORNER RADII SHARPENESS.					JAN 85
6 84 7985 07	STRAIGHTENING THE GFE PRESS FROM DIPEC IS UNSUITABLE BECAUSE OF AN ERROR. THE PRESS WAS LISTED AS A 25 TON HYDRAULIC PRESS BUT UNFORTUNATELY THE PRESS HAD BEEN MISLABELED AND WAS A MUCH SMALLER PRESS. A CONTRACT MODIFICATION HAS BEEN PREPARED + WILL BE SUBMITTED.				JAN 85	JAN 85
6 84 7985 08	TRIBOLOGY NO ACCOMPLISHMENT SINCE THE CONTRACT HAS NOT BEEN AWARDED.	20.0			JAN 85	JAN 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 80 8017	POLLUTION ABATEMENT PROGRAM PLANS WERE DEVELOPED TO HAVE PIPES INSTALLED SO THE FULLY MIXED CUTTING FLUID AND THE DEIONIZED WATER CAN BE PIPED TO VARIOUS LOCATIONS WITHIN BUILDING 220. THE TECHNICAL REPORT IS BEING FINALIZED.	86.0		86.0	JAN 81	DEC 84
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS EFFORTS WERE CONTINUED TO PROMOTE A ECP TO RELIEVE LOW TEMPERATURE PROPERTY REQUIREMENTS, TO IMPROVE THE HEAT AGING RESISTANCE, AND TO REDUCE VULCANIZATION TIME. FOUR SEAL MOLDS HAVE BEEN FABRICATED. A REPLACEMENT MATERIAL FOR DTFE IS BEING TESTED.	123.0		49.2	MAY 83	MAR 85
6 81 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS GAS METAL ARC WELDING IS REPLACING THE MICROLOY ELECTROPLATING PROCESS FOR PLATING THE M-1 PISTON AND FOLLOWER. SATISFACTORY RESULTS HAS ENABLED CERTIFICATION OF THE WELD PROCEDURE. PROCESS PARAMETERS HAVE BEEN ESTABLISHED AND THE PROCESS IMPLEMENTED	200.0	20.8	179.2	JUN 82	NOV 84
6 80 8051	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) PROJECT RESULTS HAVE BEEN REVIEWED WITH ARSENAL OPERATIONS INDUSTRIAL ENGINEERING PERSONNEL. REVISIONS TO THE FINAL TECHNICAL REPORT ARE ONGOING.	208.5	150.6	49.8	AUG 81	DEC 84
6 81 8054	OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS THE CONTACT PRINTING TECHNIQUE FOR FABRICATING SCRATCH STANDARDS HAS BEEN DEMONSTRATED. RESULTS ARE THE SAME USING PHOTOMASKS FROM TWO SUPPLIERS. SCRATCH PATTERN IS UNDERGOING REFINEMENT TO OBTAIN AGREEMENT WITH STANDARDS AT ARDC.	266.0	146.1	80.9	AUG 84	SEP 84
6 82 8108	PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS NASTRAN COMPUTER MODEL VERIFIED EFFECTS OF COLD TEMPERATURE ON M60 MIRROR ELEMENTS. M60 OPTICAL ASSEMBLIES WERE BONDED USING THREE DIFFERENT GEOMETRIES. DETERMINING EFFECT OF BOND GEOMETRY ON OPTICAL PROPERTIES.	205.0		190.2	DEC 83	NOV 84
6 81 8135	IN-PROCESS CONTROL OF MACHINING MILLING-ALL RETROFITTING AND INTERCONNECTING OF THE OPTICAL GAUGE, COMPUTER, AND ADAPTIVE FEED CONTROL WERE COMPLETED. COMPUTER PROGRAMS WERE WRITTEN INTEGRATING NC MACHINING, ADAPTIVE FEED CONTROL, IN-PROCESS GAGING, TOOL PATH, AND INSPECTION.	906.0	647.3	198.6	OCT 82	DEC 84
6 82 8135	IN-PROCESS CONTROL OF MACHINING TURNING AND BORING-VARIOUS GAUGES, INSTRUMENTATION, ADAPTIVE CONTROLS AND COMPUTERS WERE ANALYZED AND TESTED. A CNC LATHE IS BEING RECTROFITTED.	841.0	594.3	10.3	FEB 84	DEC 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 81 8136	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS THE PROBLEM HAS BEEN MODELED AND REDESIGN RECOMMENDATIONS MADE. MATERIALS HAVE BEEN ORDERED TO FABRICATE A NEW PISTON AND SLEEVE. THIS PROJECT HAS SLIPPED DUE TO PROCUREMENT DIFFICULTIES.	80.0		34.5	SEP 83	SEP 85
6 81 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS NO SIGNIFICANT PROGRESS TO REPORT DURING THIS PERIOD.	189.0	84.0	105.0	DEC 82	SEP 83
6 82 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS AN EVALUATION WAS STARTED FOR THE COST EFFECTIVE MODIFICATION OF COMMERCIALLY AVAILABLE EQUIPMENT. TALANDIC INSTRUMENT AND RELATED TECHNIQUES IS THE SYSTEM UNDER EVALUATION. DUAL CAPABILITY IS AVAILABLE FOR SCATTERING OR REFLECTANCE TECHNIQUES.	258.0	125.0	65.0	OCT 83	DEC 84
6 81 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS PRODUCTION PHASE HAS BEEN DELAYED SO THAT UNIVERSITY OF ROCHESTER CAN FINISH DESIGNING EYEPIECE OF M19 BINOCULARS.	374.0	334.0	40.0	MAY 83	MAR 85
6 82 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) A COMPUTER PROCEDURE WAS ESTABLISHED USING STANDARD ENGINEERING FORMULAS FOR DETERMINING FEEDING DISTANCES. DIFFERENT SHADES FOR STEEL COMPONENTS IS THE AREA OF EMPHASIS. A HOT TEARING TEST WAS ESTABLISHED TO VERIFY PREDICTIONS OF STRESS CONDITIONS.	250.0		78.7	MAR 84	JUN 85
6 83 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) NO SIGNIFICANT PROGRESS TO REPORT DURING THIS PERIOD.	136.0		4.7	FEB 85	SEP 85
6 84 8231	IMPROVED CASTING TECHNOLOGY NO SIGNIFICANT PROGRESS TO REPORT DURING THIS PERIOD.	122.0		3.9	MAR 86	MAR 86
6 82 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS DEDICATED 60HP LATHE INSTALLED AND CALIBRATED FOR TURNING TESTS ON COATED CARBIDE INSERTS. COATING WEAR PROPERTIES AND CHIP BREAKER CONFIGURATIONS ANALYZED, AND A SYSTEMATIC TURNING TEST PROGRAM WAS IMPLEMENTED.	102.0		85.2	JUN 83	MAR 85
6 84 8249	SHORT-CYCLE HEAT TREATMENT OF WEAPON COMPONENTS A LITERATURE SURVEY OF SHORTENED HEAT TREATMENT CYCLES IN INDUSTRY IS BEING CONDUCTED. SPECIFICATIONS ARE BEING PREPARED FOR THE PURCHASE OF STEEL SPECIMENS WITH WHICH TO PERFORM TESTS FOR HEAT TREATMENT AND MECHANICAL PROPERTIES.	132.0		4.2	JUN 85	JUN 85
6 84 8250	IMPROVED FABRICATION OF RECOIL WEAR SURFACES SURFACE INTEGRITY PROBLEMS ARE BEING REVIEWED AND ANALYZED SO THAT A SCOPE OF WORK CAN BE PREPARED. A PORTABLE STRESS ANALYZER HAS BEEN LOCATED. TEST RESULTS FROM TWO DIFFERENT TEST METHODOLOGIES ARE BEING MONITORED.	28.0		4.8	DEC 84	DEC 84

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8251	IMPROVED MELTING PRACTICES A HYDROGEN AND NITROGEN-OXYGEN TESTER WAS INSTALLED. THE TESTERS WILL BE USED TO CORRELATE GAS CONTENT WITH CASTING DEFECTS THE RESULTS WILL BE USED TO SELECT THE BEST PROCESS.	193.0	5.1	115.0	JUN 83	APR 85
6 83 8251	IMPROVED MELTING PRACTICES CERAMIC FILTERS WERE PLACED ON ORDER. SOFTWARE FOR THE QUANTOMETER MEASURING THE CHEMISTRY OF STEEL HEATS WAS ORDERED.	164.0		52.0	FEB 85	JUL 85
6 82 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES WESTINGHOUSE HAS COMPLETED THE DESIGN OF CHANNEL WAVEGUIDES AND DIRECTIONAL COUPLERS. ARDC FOUND ERRORS IN MODEL THAT WESTINGHOUSE CORRECTED. AIR FORCE INTERESTED IN RAD DAMAGE. WESTINGHOUSE IS NOW COMPLETING A FABRICATION PROCEDURE.	480.0	336.0	104.4	JAN 83	APR 85
6 84 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES ARDC IS MEASURING OPTICAL INDEX PROFILES AND WAVEGUIDE CHARACTERISTICS OF SAMPLES. SPECIFICATIONS FOR PILOT PRODUCTION FACILITY CALLED FOR IN FY85-87 PLANS ARE BEING PREPARED.	155.0		30.6	APR 85	APR 85
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LASER RANGEFINDERS IN PROCESS INSPECTION DEVICE HAS BEEN TESTED WITH M60A3 LRF SYSTEM AND ACCURATE MEASUREMENTS OF POWER OUTPUT AND RECEIVER SENSITIVITY HAVE BEEN PERFORMED. PHOTOMULTIPLIER TUBE SENSITIVITY CAN BE MEASURED AT MANY SIMULATED RANGES.	355.0	100.0	217.0	AUG 83	MAR 85
6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS SPRINGS OF THREE DIFFERENT WIRE SIZES HAVE BEEN FABRICATED, STRESS-PEENED AND FATIGUE TESTED. THE FATIGUE STRENGTH WAS MARKEDLY GREATER THAN THAT OF NON-PEENED SPRINGS. CONTRACT BEING MODIFIED AT NO ADDED COST TO INCLUDE CONVENTIONALLY PEENING SPRINGS	139.5	80.5	52.2	AUG 83	FEB 85
6 81 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) A SCOPE OF WORK WAS STAFFED THROUGH LEGAL AND PROCUREMENT. A MANAGEMENT DECISION PAPER WAS PREPARED FOR ANALYTICAL SUPPORT SERVICES. A TECHNICAL SUPPORT GROUP WAS ESTABLISHED FOR CONTRACT EXECUTION.	235.0		53.1	JUL 82	SEP 85
6 82 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6 81 8305 FOR EFFORT STATUS.	204.0		2.9	SEP 86	SEP 85
6 83 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) A PLAN OF ATTACK AND SCHEDULE WAS UPDATED TO ACCOMODATE INDUSTRY DEVELOPMENTS. THE STATEMENT OF WORK WAS REVISED BASED ON INTERVIEWS WITH ROCK ISLAND ARSENAL PEOPLE.	75.0		75.0	OCT 84	SEP 85

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 84 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6 81 8305 FOR EFFORT STATUS.	1,677.0			SEP 85	SEP 85
6 82 8306	ON-LINE PRODUCTION INFORMATION SYSTEM (CAM) TEN PROPOSALS WERE RECEIVED IN RESPONSE TO AN RFP FOR TECHNICAL SERVICES. STRUCTURED ANALYSIS FOR COMPUTER SUPPORT IN MANUFACTURING PLANNING AND CONTROL WAS THE AREA OF EMPHASIS. CONTRACT AWARD IS IN PROGRESS.	70.0		6.5	OCT 84	MAR 85
6 83 8306	ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM) FOR TOOL CONTROL APPLICATION, A PROTOTYPE SYSTEM IS BEING ESTABLISHED. A UNIX BASED RADIO SHACK MICROCOMPUTER IS THE BASIS FOR THIS SYSTEM. FUNCTIONAL ANALYSIS EFFORTS WERE INITIATED FOR TOOL ISSUE AND CONTROL AND MAINTENANCE PLANNING AND CONTROL.	200.0	7.5		SEP 84	AUG 85
6 84 8306	ON-LINE PRODUCTION IMFORMATION SYSTEM - RIA (CAM) NO SIGNIFICANT WORK ACCOMPLISHED DURING THIS REPORT PERIOD.	571.0			OCT 85	OCT 85
6 84 8323	SPRAY-AND-FUZE PROCESSING OF ARMAMENT COMPONENTS PROCUREMENT ACTION WAS INITIATED TO DEVELOP AND OPTIMIZE A SPRAY AND FUSE COATING PROCESS FOR RESURFACING AND SALVAGING WORN OUT RECOIL PISTONS. TECHNICAL PROPOSALS HAVE BEEN EVALUATED AND CONTRACT NEGOTIATIONS ARE IN PROCESS.	200.0		76.0	APR 85	APR 85
6 83 8324	PROCESS CONTROLS FOR POWDERED METAL WEAPON COMPONENTS PHASE I EFFORT HAS BEEN COMPLETED AND DRAFT INTERIM REPORT SUBMITTED. DATA FOR POWDER FORGED TYPE 46XX AND 10XX STEELS HAVE BEEN REVIEWED. FEASIBILITY AND COST OF FABRICATING A GROUP OF 30 SMALL CALIBER WEAPON COMPONENTS WAS ASSESSED.	161.0	118.5	36.0	SEP 84	APR 85
6 84 8324	PROCESS CONTROLS FOR P/M WEAPON COMPONENTS FUNDING HAS BEEN RECEIVED RECENTLY AND A REQUEST FOR A PROPOSAL HAS BEEN SEND TO SPS TECHNOLOGIES, THE CONTRACTOR FOR THE FY83 PROJECT.	160.0		19.5	JUN 85	JUN 85
6 84 8326	APPLICATION OF CORROSION RESISTANT COATINGS A STUDY WAS MADE TO IDENTIFY THE EXTENT OF THE CORROSION AND WEAR OF PARTS OF THE M16 RIFLE. A CONTRACTOR HAS BEEN SELECTED AND STEPS ARE BEING TAKEN TO AWARD THE CONTRACT.	185.0		37.5	FEB 85	FEB 85
6 84 8329	FIRE CONTROL OPTICAL DEVICES NEW PROCESS PRODUCTION TECH A PROCUREMENT PACKAGE WAS PREPARED FOR TWO CONTRACTORS. CONTRACT AWARD IS EXPECTED IN JULY 1984.	424.0		16.0	APR 85	APR 85

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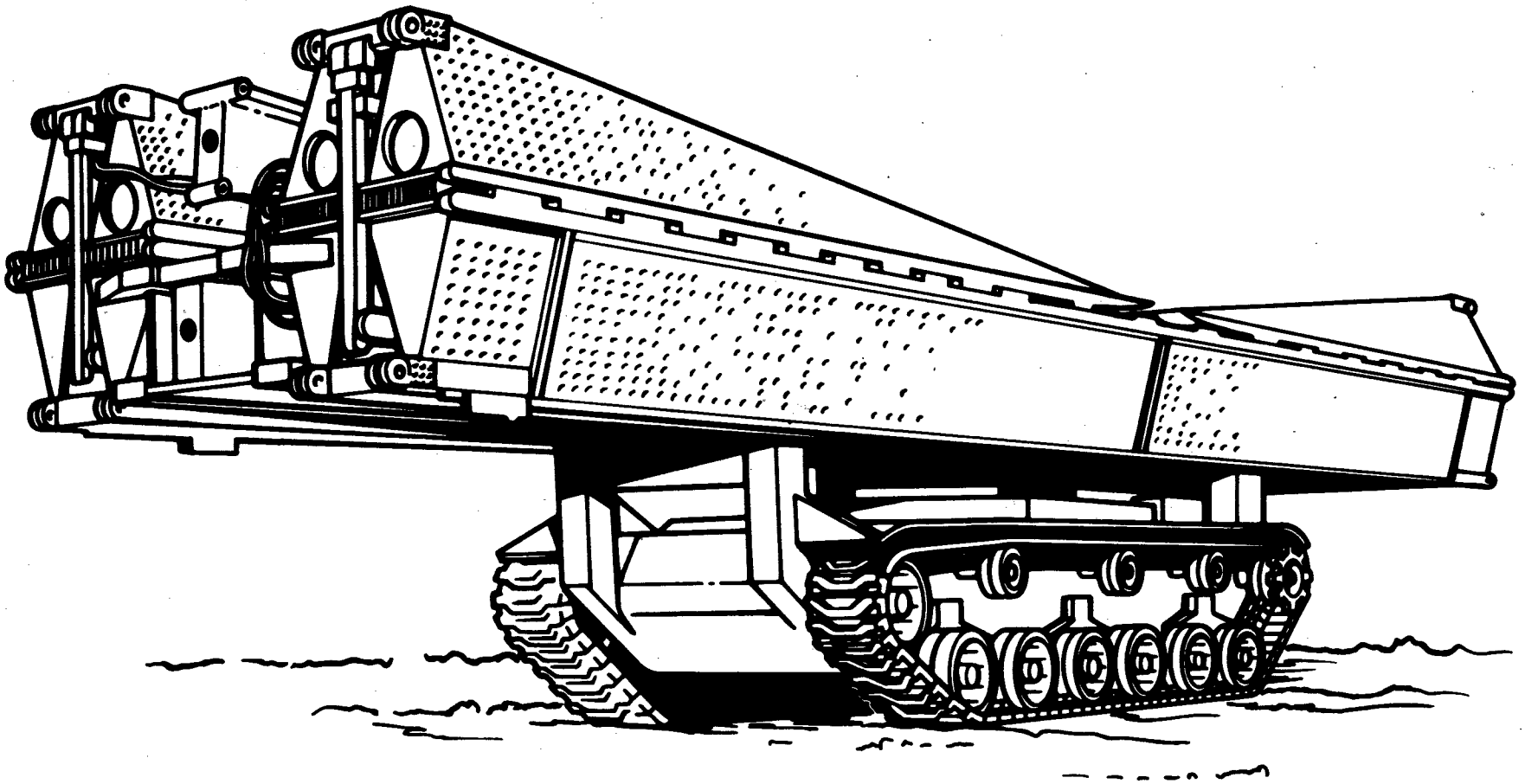
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 84 8370	AUTO INSP AND PROC CONTROL OF WPNS PARTS MFG WORK IS PROGRESSING ON SCHEDULE. A CONTRACT HAS BEEN PLACED WITH MAREMONT CORP TO DESIGN AND EVALUATE IMPROVED INSPECTION TECHNIQUES IN THE AREAS RECOMMENDED BY THE FY82 PROJECT.	300.0	221.0	11.9	SEP 86	SEP 86
6 84 8402	WARM FORGING FOR WEAPON COMPONENTS PLANS FOR THE PROJECT WERE ESTABLISHED. BOTH IN-HOUSE + CONTRACTUAL ACTIVITIES ARE PLANNED. CONTACT REGARDING CAD DIE DESIGN WAS MADE + A DECISION WILL BE MADE IF SOFTWARE USED FOR OTHER CAD PROGRAMS WILL BE ADAPTED.	227.0	100.0	20.0	SEP 85	SEP 85
6 84 8403	DESIGN CRITERIA FOR HARDENING (CAD/CAM) LITERATURE WAS REVIEWED ON COMPUTER APPLICATIONS FOR PROCESSING, COMPUTER GRAPHICS AND COMPUTER AIDED DESIGN. VARIOUS HEAT TREAT INFORMATION IS BEING COLLECTED AND ASSESSED. THIS INFORMATION IS NECESSARY FOR PREPARING THE CONTRACT STATEMENT OF WORK.	261.0		4.1	SEP 85	SEP 85
6 82 8416	FLEXIBLE MACHINING SYSTEM - RIA (CAM) THE DRAFT REPORT RECOMMENDED ACQUIRING A SIX-MACHINE FMS TO MACHINE 54 SELECTED WEAPON COMPONENTS. RIA HAS FORMED A TASK GROUP TO PURSUE THIS RECOMMENDATION AND IDENTIFY UNDERLYING RAMIFICATIONS.	138.0	100.0	2.8	SEP 83	APR 85
6 84 8416	FLEXIBLE MFG SYSTEMS W/SPECIAL TOOLING THIS PROJECT IS BEING EXECUTED AS TWO SUBTASKS. TASK 1 WILL DESIGN A FMS. TASK 2 WILL DEVELOP AN OVERALL MANAGEMENT SYSTEM AND INTERGRATE THE VARIOUS SUPPORTING SYSTEMS.	399.3		17.8	OCT 85	OCT 85
6 84 8416 01	FLEXIBLE MACHINING SYSTEM A TASK GROUP WAS FORMED TO EXECUTE THIS PROJECT. A NUMBER OF VISITS WERE MADE TO OBSERVE FMS'S IN OPERATION.	260.0			OCT 85	OCT 85
6 84 8416 02	FLEXIBLE MFG SYSTEM W/SPECIAL TOOLING RIA-CAM THE CAPACITIES AND LIMITS OF VARIOUS MACHINE TOOLS, INSPECTION SYSTEMS, CUTTING TOOLS AND PALLET SYSTEMS USED IN SINGLE-CELL AND MULTIPLE-CELL FMS'S WERE ANALYZED.	139.3		17.8	SEP 85	SEP 85
6 84 8417	FACTORY INFORMATION MANAGEMENT - RIA (CAM) AN INITIAL ANALYSIS OF THE TYPES OF COMPUTER SYSTEMS THAT CAN MET THE BASIC REQUIREMENTS WAS PERFORMED. UNIX BASED OPERATING SYSTEMS WERE PART OF THE EVALUATION. NETWORKED MICROCOMPUTERS WAS AN AREA OF EMPHASIS.	280.0			OCT 85	OCT 85



TROOP SUPPORT COMMAND
(TROSCOM)

DELINQUENT STATUS REPORTS FOR FIRST HALF CY 84

PROJECT NO	SUBTASK	TITLE	COST
E 82 3796		COMBAT VEHICLE DEGAUSSING	916

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SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 79 3532	MOLTEN SALT LITHIUM-CHLORIDE BATTERY LONG-LIVED CELL TECHNOLOGY DEVELOPED. ALSO LI-AL/FES BATTERY CONCEPT DEVELOPED FOR A FORK-LIFT TRUCK. DOE IS CONTINUING WITH DEVELOPMENT. BRDC WILL MONITOR BATTERY DEVELOPMENT. FINAL TECH REPORT PLANNED BY LATE FY84.	295.0	280.0	15.0	AUG 80	AUG 84
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10 Kw POWER UNIT TWO REACTION BONDED SILICON CARBIDE AND TWO HOT PRESSED SILICON NITRIDE VANE NOZZLES EACH SUCCESSFULLY COMPLETED FIVE HUNDRED HOUR ENGINE INDURANCE TESTS. THE FINAL REPORT WILL BE SUBMITTED IN THE NEXT REPORTING PERIOD.	422.0	322.0	100.0	APR 82	DEC 84
E 84 3796	COMBAT VEHICLE DEPERMING PRODUCTION FACILITY PHASE I (DESIGN) WAS COMPLETED IN JAN 84. VEHICLE SIGNATURE MEASUREMENTS WERE COMPLETED IN FEB 84. THE FABRICATION PHASE OF THE VEHICLE DEGAUSSING PROTOTYPE WILL BEGIN IN JUNE AND WILL BE OF 18 MONTHS DURATION.	1,258.0	1,158.0	4.0		DEC 85

APPENDICES

APPENDIX I: COMMAND IDENTIFICATION

APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION

Action Command Identifier	Acronym	Command
Management Engineering Training Activity	AMETA	D
Depot Systems Command	DESCOM	G
Electronics R&D Command	ERADCOM	H
Test Measurement Diagnostic Equipment Support Group	TMDE	K
Army Materials and Mechanics Research Center	AMMRC	M
Test & Evaluation Command	TECOM	0
Aviation Systems Command	AVSCOM	1
Communications & Electronics Command	CECOM	2
Missile Command	MICOM	3
Tank-Automotive Command	TACOM	4
Armament, Munitions, & Chemical Command (Munitions)	AMCCOM (Ammo)	5
Armament, Munitions, & Chemical Command (Weapons)	AMCCOM (Wpns)	6
Troop Support Command	TROSCOM	7

NOTE: Abbreviation - R&D - Research and Development

APPENDIX II: USER'S GUIDE

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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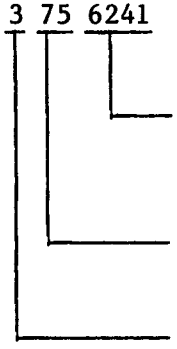
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 83 6107 02	ADAPTIVE FLUIDIC DAMPER THE WORK ON THIS TASK IS COMPLETE WITH THE EXCEPTION OF THE FINAL TECHNICAL REPORT. THE FINAL REPORT WILL BE INCLUDED WITH THE NEXT SEMI-ANNUAL SUBMISSION.	90.0	57.0	33.0	MAR 84	DEC 84
4 83 6107 03	ORGANIC COMPOSITE ROAD WHEEL A STRESS ANALYSIS COMPARISON OF A CURRENT ALUMINUM ROAD WHEEL AND COMPOSITE ROADWHEEL DESIGN HAS BEEN COMPLETED. A HIGH SPEED POLAR WINDING MACHINE HAS BEEN INSTALLED AND TESTED.	343.0	309.0	34.0	AUG 84	NOV 84
4 83 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE PERFORMANCE VERIFICATION HAS BEEN COMPLETED. THE SUBSYSTEM MECHANICAL INTERFACE HAS BEEN FINALIZED. THE SYSTEM VERIFICATION IS IN-PROCESS.	750.0	724.0	13.0	DEC 85	DEC 84
(1) (2)	(3) (4)	(5)	(6)	(7)	(8)	(9)

THIS FORM IS USED FOR SUMMARIZING THE MMT PROGRAM PROJECTS' STATUS. USER'S GUIDE BELOW EXPLAINS THE SIGNIFICANCE OF EACH COLUMN HEREIN.

USER'S GUIDE
to
SUMMARY PROJECT STATUS REPORT

COLUMN 1. PROJECT NUMBER

A project identified by the first and last four digits which corresponds to the project title for the life of its execution. However, for accounting and reporting purposes, a project is recognized by the totality of its seven-digit numeric or alphanumeric number. Example:



COLUMN 2. Subtask identifier, if any.

COLUMN 3. PROJECT TITLE

The title descriptive of project effort.

COLUMN 4. An abstract of project status taken from the Project Status report. Whenever possible, technical accomplishments during the reporting period were summarized.

COLUMN 5. AUTHORIZED

The total amount of funds authorized in dollars, to complete the project.

COLUMN 6. CONTRACT VALUES

The portion of authorized funds actually expended or obligated for work performed by private industry.

COLUMN 7. EXPENDED LABOR AND MATERIAL

The portion of authorized funds actually expended in-house, namely within the Government.

COLUMN 8. ORIGINAL PROJECTED COMPLETION DATE

Calendar date clearly given in, or the nearest calendar month and year as could be read from the Milestone Chart of, the very first Project Status Report, RCS DRCMT-301.

COLUMN 9. PRESENT PROJECTED COMPLETION DATE

Calendar date clearly given in, or the nearest calendar month and year as could be read from Milestone Chart of, the latest Project Status Report, RCS DRCMT-301.

APPENDIX III: ARMY MMT PROGRAM REPRESENTATIVES

ARMY MMT PROGRAM REPRESENTATIVES

HQ, AMC
US Army Materiel Command
ATTN: AMCMT/Mr. F. Michel
5001 Eisenhower Avenue
Alexandria, VA 22333

C: 202 274-8284/8298
AV: 284-8284/8298

AMCCOM
US Army Armament, Munitions & Chemical Command
ATTN: AMSMC-PBS-A (R)/Mr. Carrol Schumacher
Rock Island Arsenal
Rock Island, IL 61299-6000

C: 309 794-3517/3665
AV: 793-3517/3665

US Army Armament, Munitions & Chemical Command
ATTN: AMSMC-PMP-P (D)/Mr. Donald J. Fischer
Dover, NJ 07801

C: 201 724-6092
AV: 880-6092

US Army Armament, Munitions & Chemical Command
Chemical Research and Development Center
ATTN: SMCCR-PMI/Mr. Joe Abbott
Building E5101
Aberdeen Proving Grounds, MD 21010

C: (301) 724-3418/3586
AV: 584-3418/3586/3010

AMETA
US Army Management Engineering Training Activity
ATTN: AMXOM-SE/Mr. Paul Wagner
Rock Island, IL 61299

C: 309 794-4041
AV: 793-4041

AMMRC
US Army Materials & Mechanics Research Center
ATTN: AMXMR-PP/Mr. John Gassner
Watertown, MA 02172

C: 617 923-5521
AV: 955-5521

AMRDL
US Army Applied Technology Laboratory
Army Research Technology Lab (AVSCOM)
ATTN: DAVDL-ATL-ATS/J. Waller
Fort Eustis, VA 23604

C: 804 878-5921/2401
AV: 927-5921/2401

AVSCOM
US Army Aviation Systems Command
ATTN: AMSAV-PEC/Mr. Fred Reed
4300 Goodfellow Blvd.
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